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THE
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Vol. X., No. 8.



SHANGHAI—MANILA



January, 1914.

INTERNATIONAL INTRIGUES IN
CHINESE RAILWAYS

TRIUMPH OF RUSSO-FRANCO-BELGIAN SCHEMES; AND THE
BURGLARY OF THE YANGTZE VALLEY

SUBVERSION OF BRITISH
INTERESTS BY THE
OFFICIAL GROUP

THE REASONS WHY BRITISH ENGINEERS AND MANUFACTURERS
HAVE BEEN DEBARRED FROM FREE COMPETITION IN CHINA

THE 1905 AGREEMENT. THE SINYANG-PUKOW AGREEMENT

22
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(See July Issue)

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(See August Issue)

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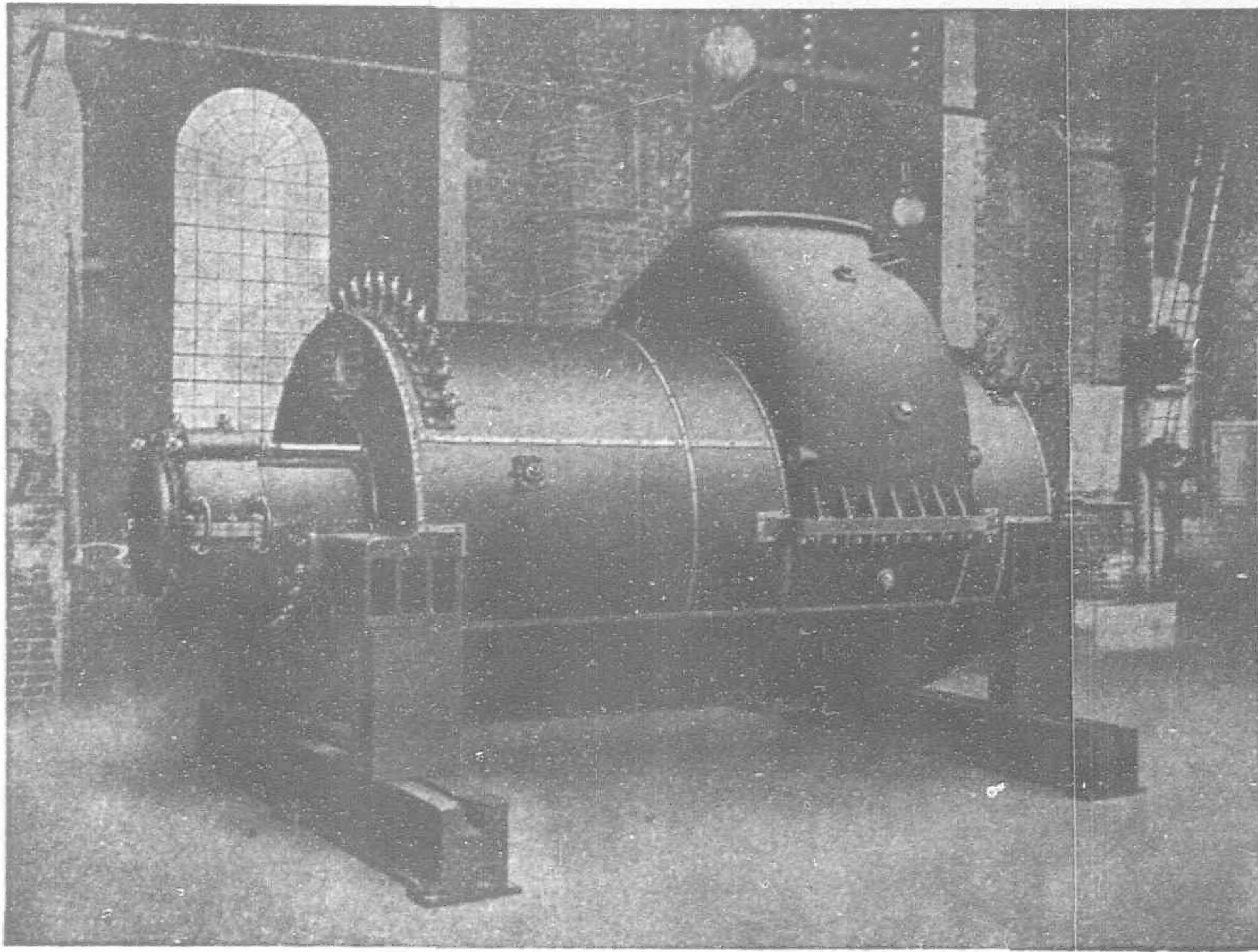
(See June Issue)

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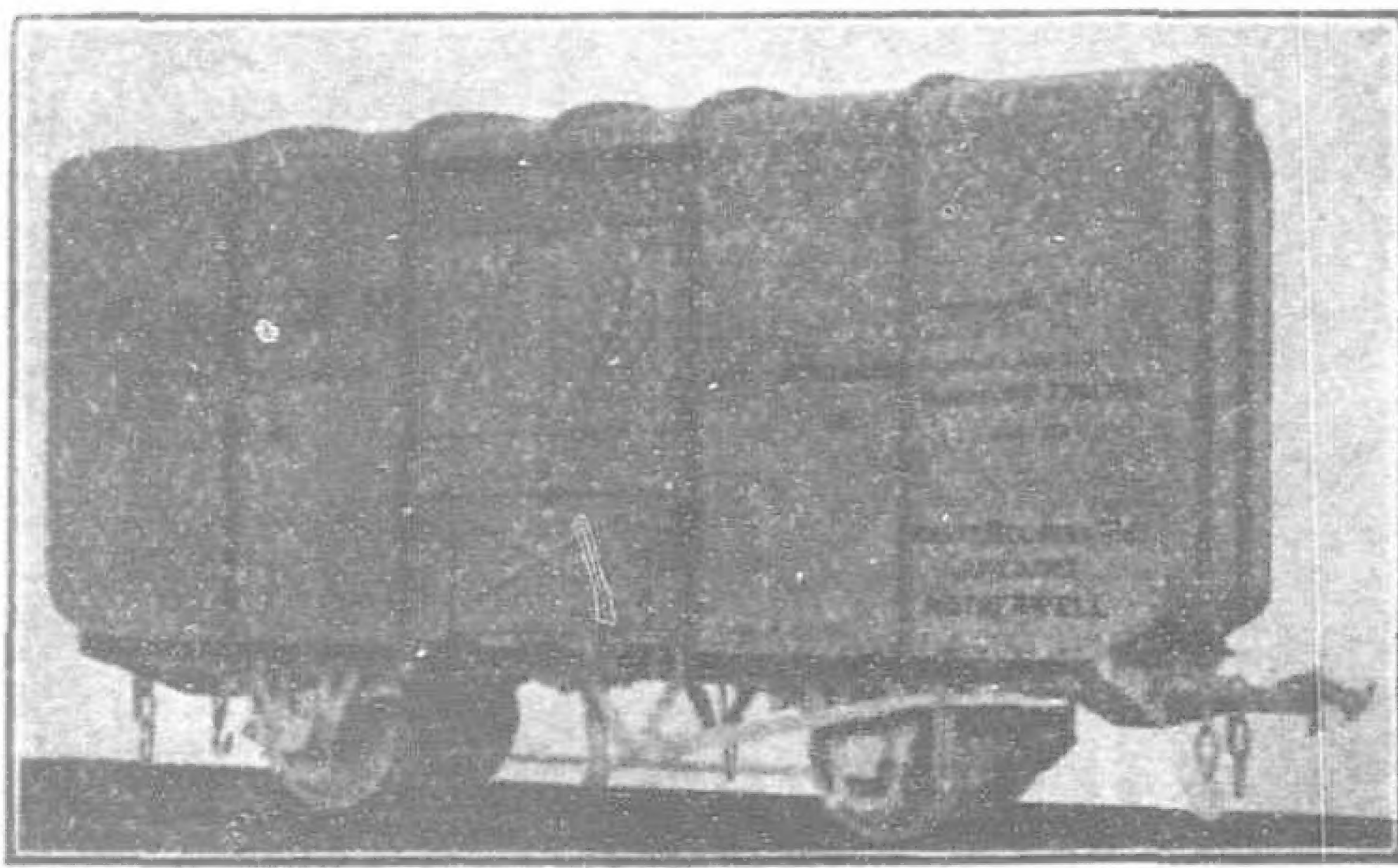
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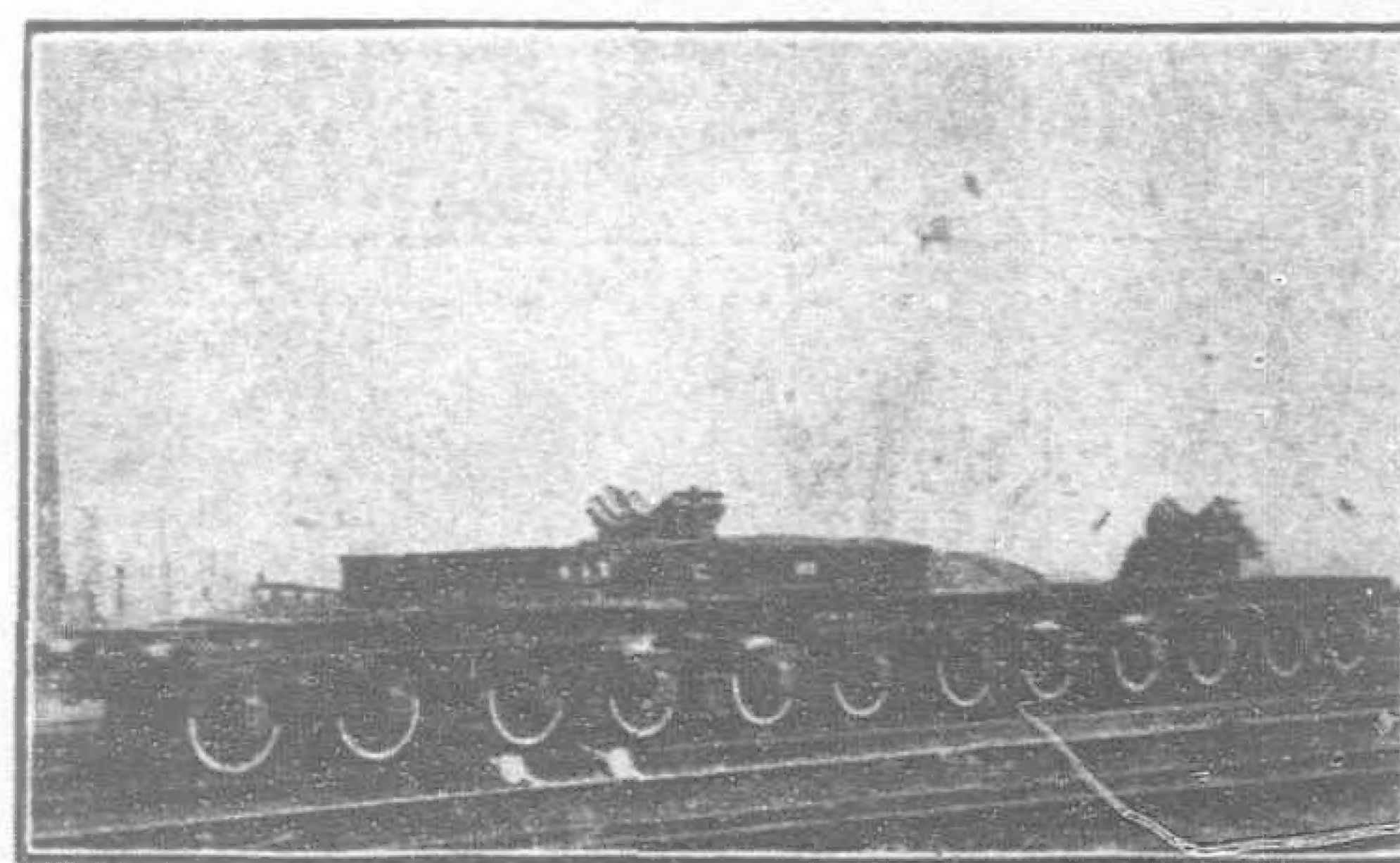
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Silver Reserve Fund.....\$17,450,000
Reserve Liability of Prop'rs..\$15,000,000

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Manager.

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CHINESE GOVERNMENT RAILWAYS

TIENTSIN-PUKOW LINE

TIME TABLE

1st December 1913 and until further notice

DOWN TRAINS				STATIONS			UP TRAINS				
DAILY		SATURDAYS ONLY EXPRESS	MONDAYS ONLY EXPRESS				DAILY				
MIXED	MAIL						MAIL	MIXED			
7.30	5.15	9.35	11.20 (A)	dep.	Tientsin East	arr.	(C) (H) 14.53	16.20			
		9.45	11.30	arr. }	Tientsin Central	{ dep.	14.43	16.10		21.24	
		10.02	11.48 (B)	dep. }		{ arr.	14.33	15.40			
		9.46	13.36	14.38	dep.	Tsangchow	dep.	11.52	12.34		17.03
		14.16	16.44	17.19	dep.	Techow	dep.	9.21	9.50		12.28
	17.59	19.40	20.02	arr. }	Tsinanfu	{ dep.	6.40	7.00		8.30	
		20.32	20.12 (C)	dep. }		{ arr.	(F) 6.30	6.06	18.17		
			23.12	22.22	dep.	Taianfu	dep.	4.33	3.48	15.39	
			2.08	0.45	dep.	Yenchowfu	dep.	2.15	0.59	12.55	
			5.02	3.20	dep.	Lincheng	dep.	TUESDAYS 23.45	22.00	9.43	
18.32	13.00	6.56	5.08	arr. }	Hsuchowfu	{ dep.	21.47	19.56	7.05		
		7.16	5.18	dep. }		{ arr.	21.37	19.36	11.20		
	18.42	11.20	8.55	arr. }	Pengpu	{ dep.	18.00	15.10	6.00	20.38	
11.30	9.05	dep. }	{ arr.	17.50		14.56					
10.20		15.10	12.05	dep.	Chuchow	dep.	15.03	11.20		16.13	
12.03		16.30	13.13 (D)	arr.	Pukow	dep.	(E) 13.45	9.50		14.20	

Yenchowfu-Tsiningschow Branch Daily Mixed

14.00 dep.	Yenchowfu	arr. 11.33
15.03 arr.	Tsiningschow	dep. 10.30

Lincheng-Tsochuang Branch Daily Mixed

17.30	Lincheng	arr. 8.08	14.38
18.38	Tsochuang	dep. 7.00	13.30

FERRY SERVICE ACROSS YANGTSE

	DAILY			SUN- DAYS	MON- DAYS		DAILY			SUN- DAYS	MON- DAYS
	A.M.	P.M.	P.M.	P.M.	P.M.		A.M.	P.M.	P.M.	P.M.	P.M.
Pukow dep.	10.20	12.40	5.00	1.35	2.10	Hsiakwan dep.	9.00	1.40	4.00	12.35	1.15
Hsiakwan arr.	10.30	12.50	5.10	1.45	2.20	Pukow arr.	9.10	1.50	4.10	12.45	1.25

NOTE: Express Trains with Dining, Sleeping, 1st and 2nd class cars are operated from Tientsin to Pukow on Saturdays and vice versa on Mondays. One 3rd class car is attached to each train only for use of passengers' servants, if any.

Sleeping Accommodation may be reserved on application to the Traffic Manager, Head Office, Tientsin or to the Traffic Inspector, Tsinanfu or Pukow. It is highly advisable to apply for reservation at the earliest possible date in order to prevent disappointment.

In addition to 1st class fares, an extra fee of \$5.00 will be charged for each berth on the Express.

- (A) Connecting with Peking-Mukden Train de Luxe from Mukden, arriving 10.35 a.m.
- (B) " " " " Mail Train from Peking, arriving 11.25 a.m.
- (C) " " " " Schantung-Eisenbahn Express from Tsingtau, arriving 5.59 p.m.
- (D) " " " " Shanghai-Nanking Express to Shanghai, leaving 2.25 p.m.
- (E) " " " " " " from Shanghai, arriving 12.30 p.m.
- (F) " " " " Schantung-Eisenbahn Express to Tsingtau, leaving 8.00 a.m.
- (G) " " " " Peking-Mukden Mail Train to Peking, leaving 3.45 p.m.
- (H) " " " " " " Train de Luxe to Mukden, leaving 1.25 a.m. Wednesdays.

Tientsin, 1st December, 1913.

By Order,
The Traffic Manager.

THE BEST TEST AND TESTIMONY
of the good qualities of
"DEFIANCE"
WOOD WORKING MACHINES

is shown by their action in hundreds of wood working plants all over the world.

Particularly do we wish to call your attention to our new

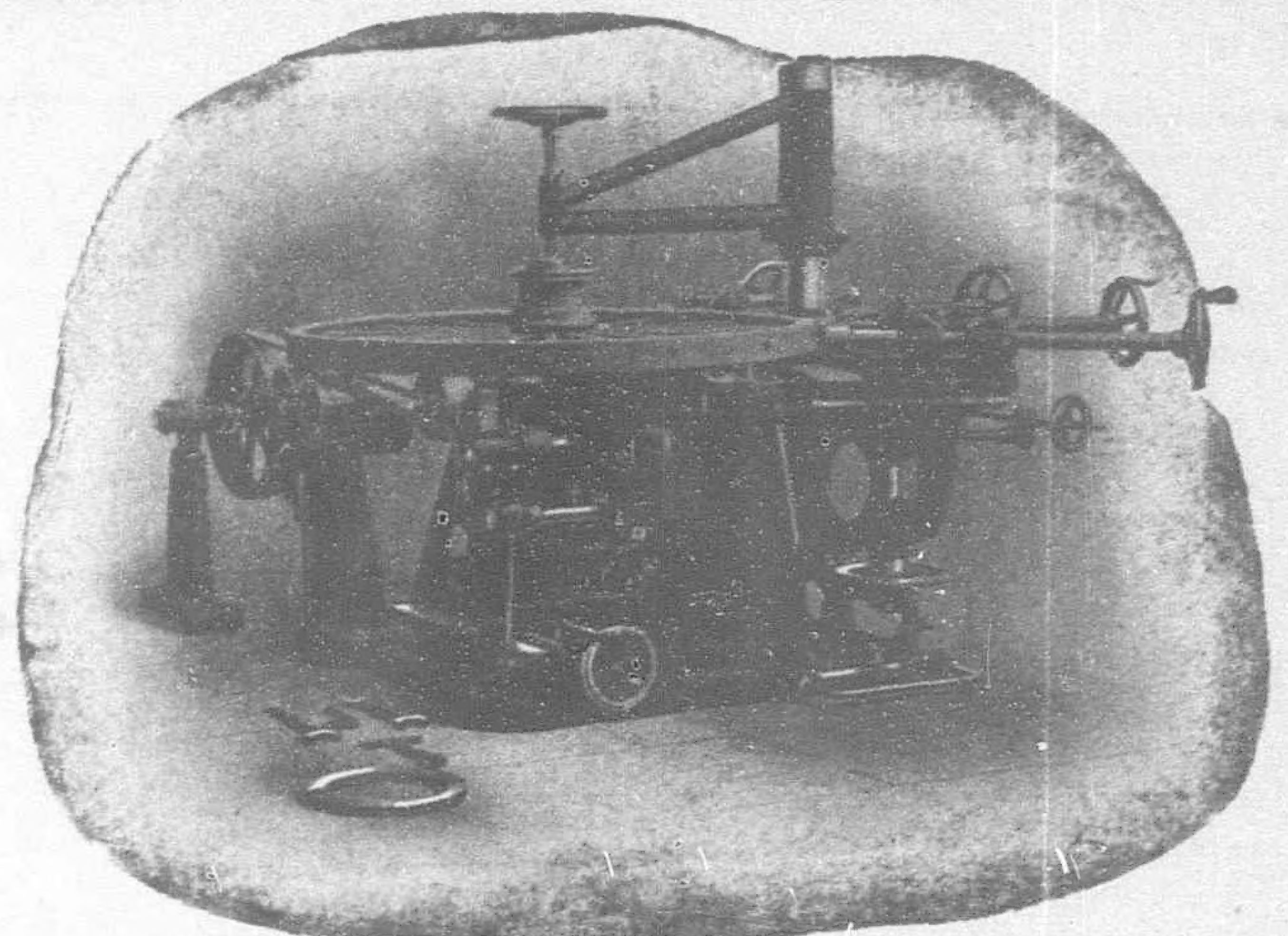
No. 3 AUTOMATIC WHEEL RIMMING MACHINE

as shown by the accompanying engraving, designed especially for wagon and carriage wheel builders for automatically placing the rim or felloe on the wheel. It will handle wheels up to 54" diameter with hubs as large as 10½" diameter, handling either sawed or bent felloes.

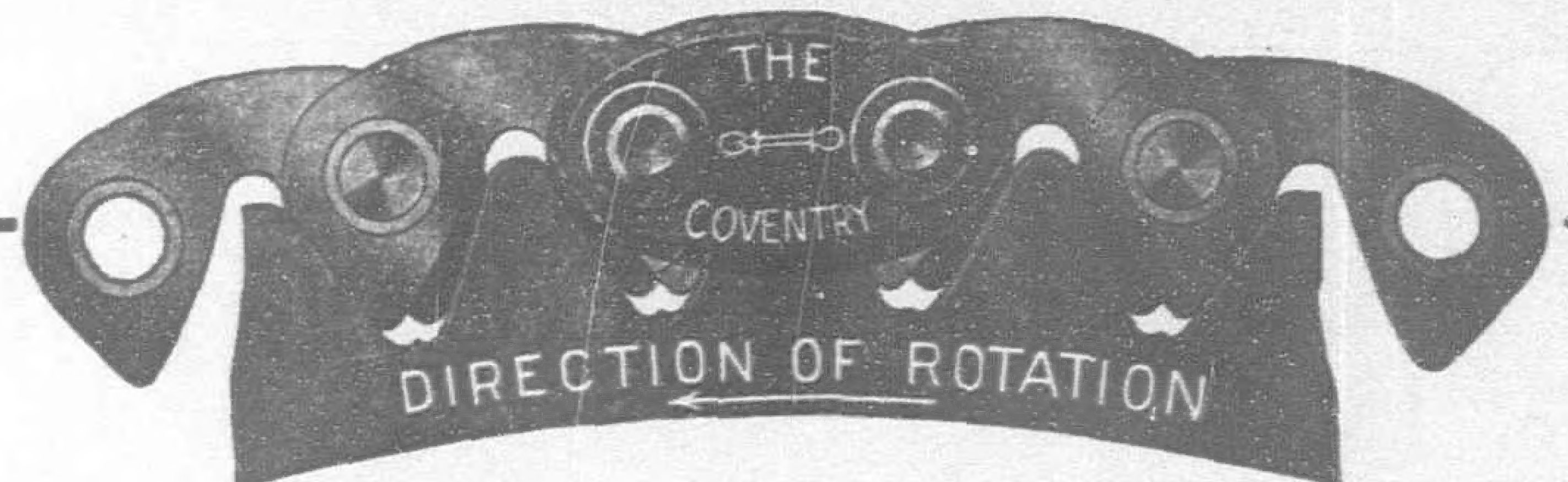
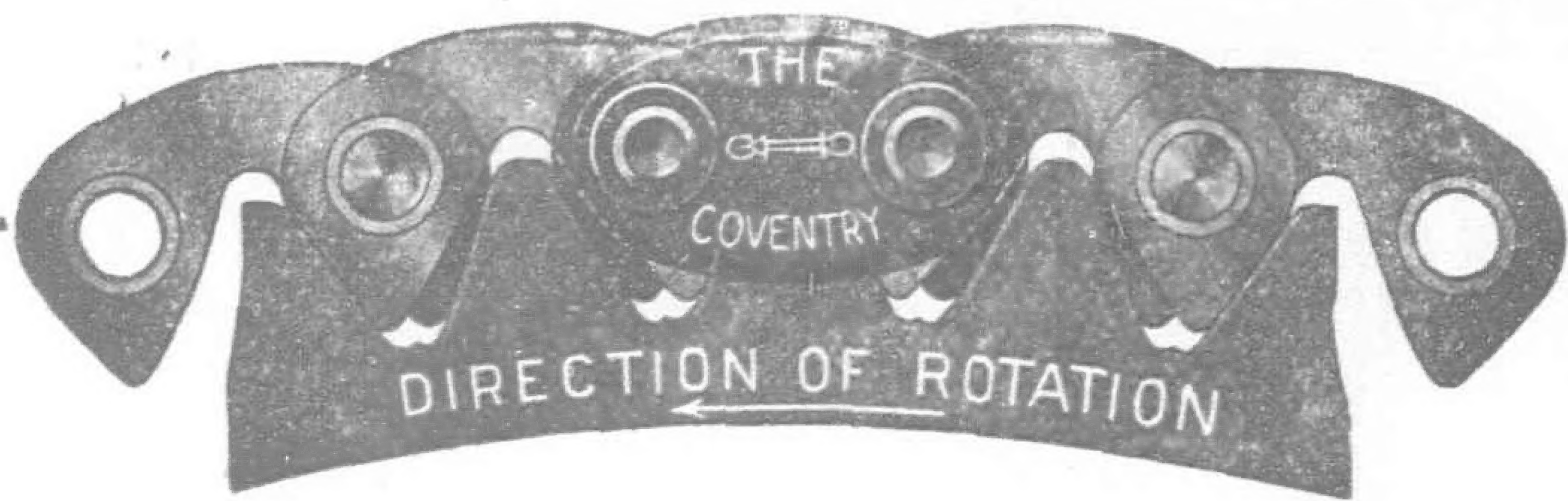
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Eastern Representatives: { SCHUCHARDT & SCHUTTE, Shanghai
PACIFIC COMMERCIAL CO., Manila, P. I.
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No. 3 Automatic Wheel Rimming Machine



CHAIN DRIVING

MEANS SIMPLY THE SILENT, EFFICIENT AND ECONOMICAL TRANSMISSION OF POWER THROUGH

"THE COVENTRY" NOISELESS CHAINS

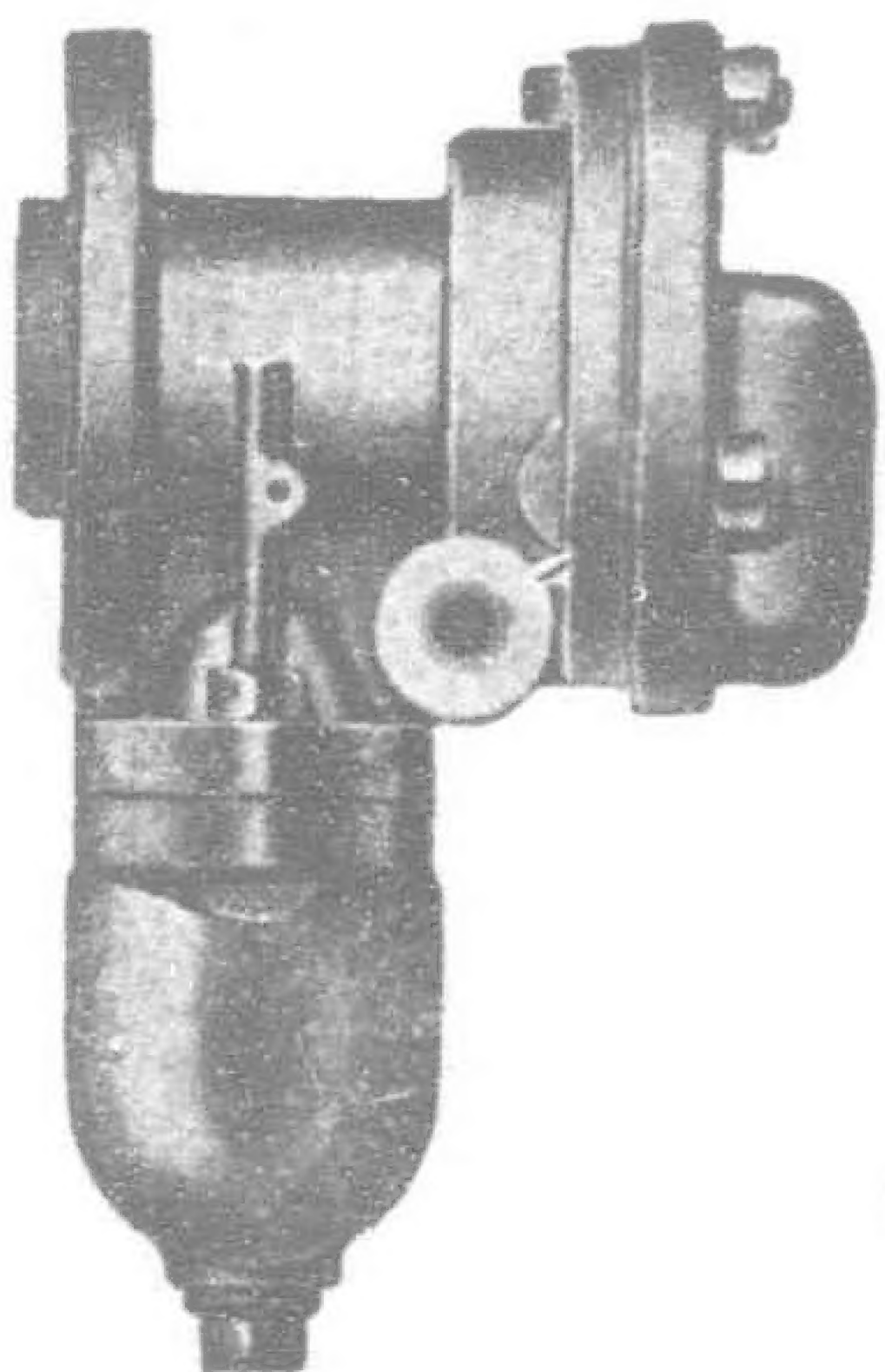
THEY GIVE A POSITIVE DRIVE AT ALL SPEEDS WITH A FIXED RATIO.

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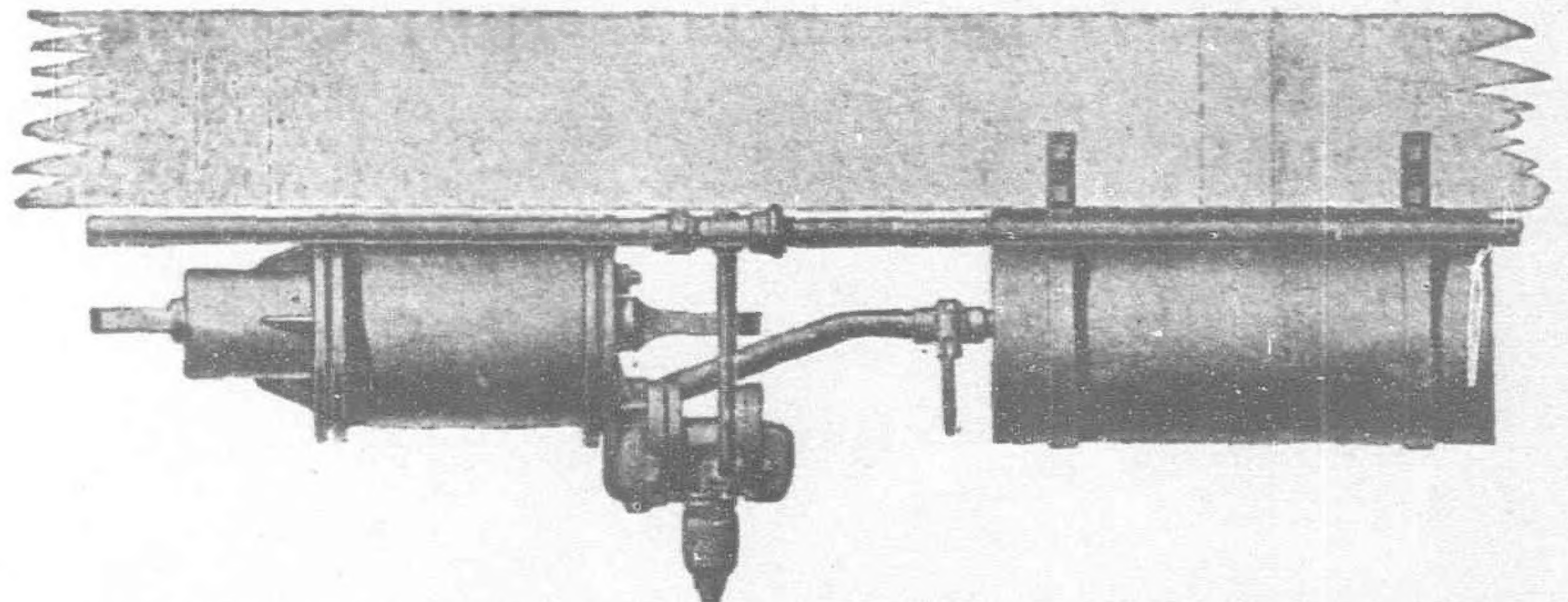
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The Westinghouse Automatic Brake

Is Standard throughout China on Standard Gauge Roads, and Indents for Railway Brake Apparatus should specify



**The 3½"
Improved
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STANDARD EQUIPMENT FOR CARRIAGE OR WAGON.

Which is SIMPLEST in construction, MOST EFFECTIVE in action and CHEAPEST to maintain.

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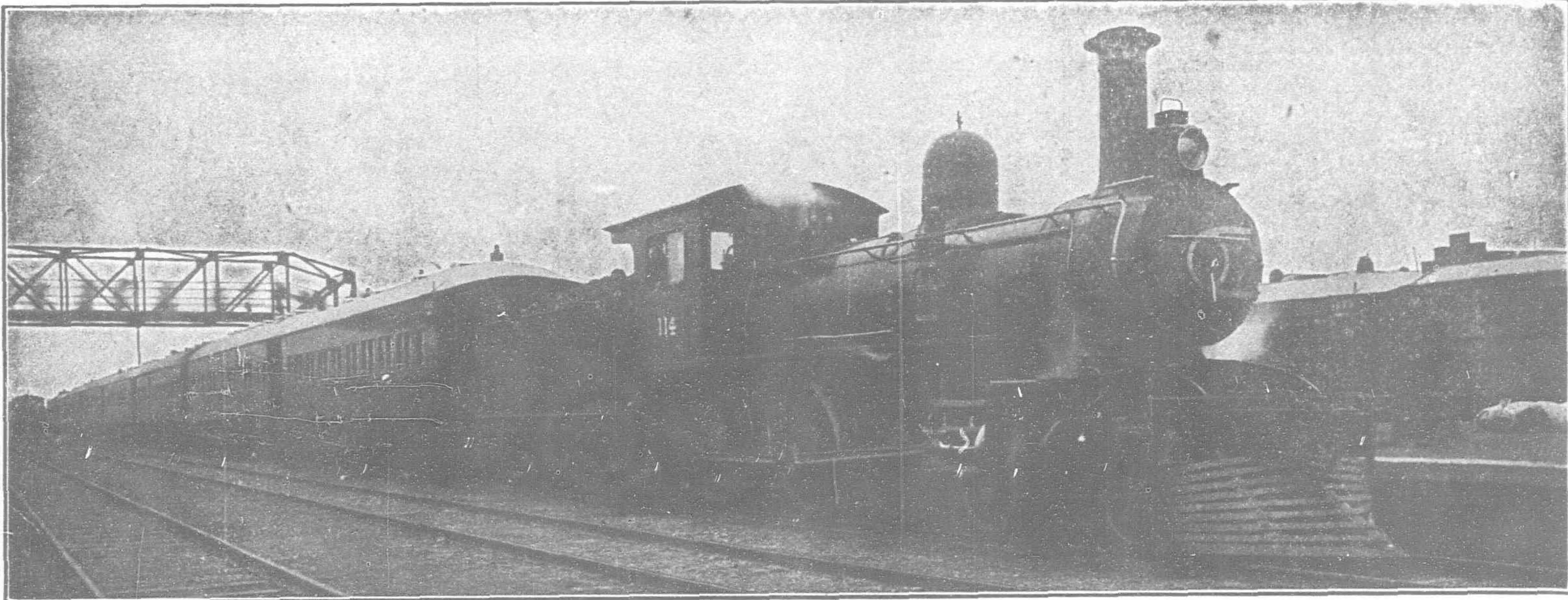
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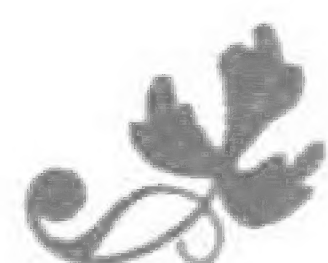
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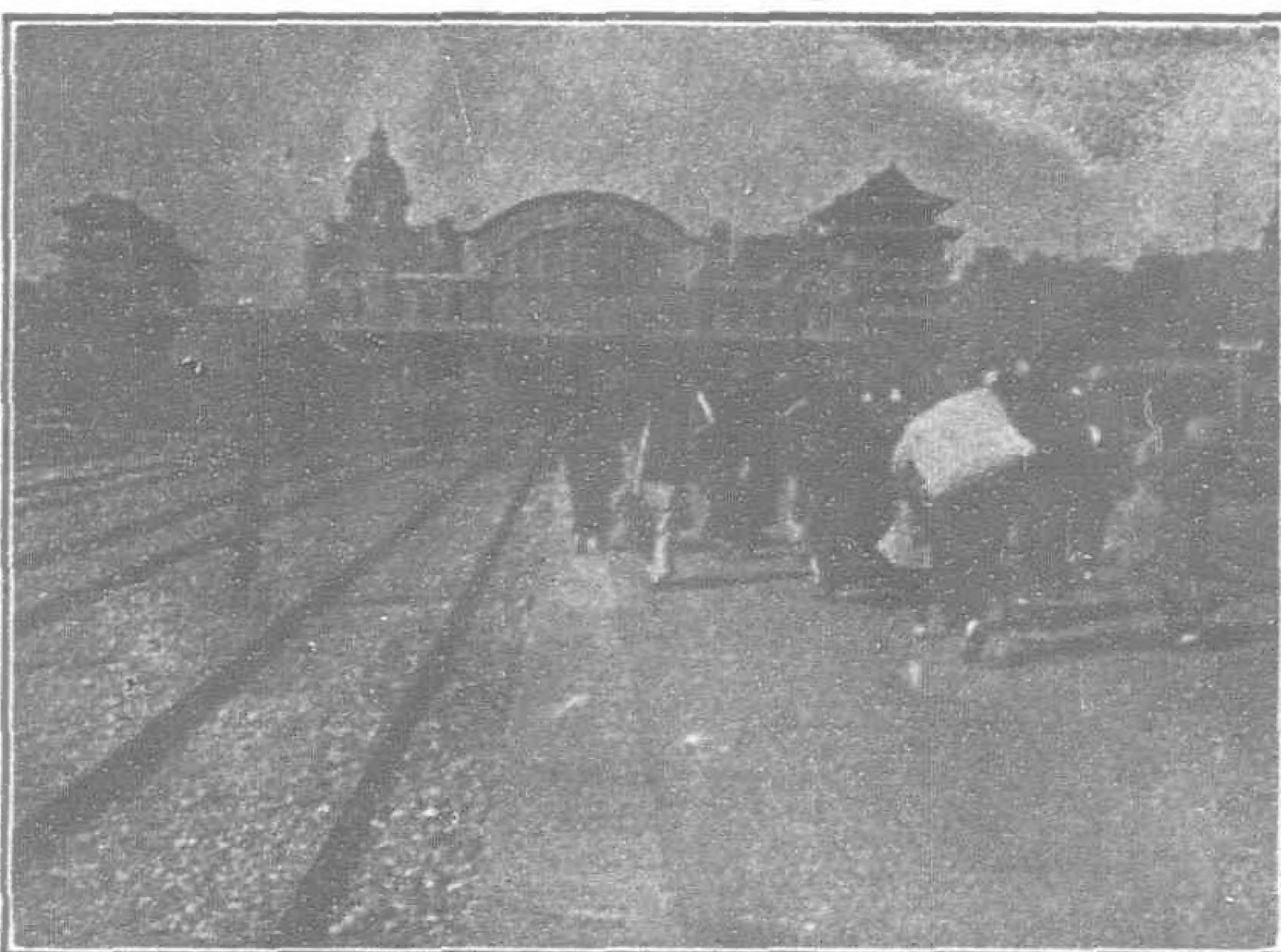
CHINESE GOVERNMENT RAILWAYS OF NORTH CHINA

THROUGH SERVICE FROM PEKING TO MUKDEN, CONNECTING AT MUKDEN WITH THE SOUTH MANCHURIA EXPRESS FROM TRANS-SIBERIAN ROUTE: AT PEKING CONNECTION IS MADE WITH THE PEKING-HANKOW RAILWAY FOR HANKOW AND YANGTSE PORTS, AND INTERMEDIATE POINTS REACHED BY THE CHEN-TAI LINE TO TAIYUANFU, THE TAO-CHING LINE, AND THE PEINLO RAILWAY TO KAIFENGFU AND HONANFU. CONNECTION IS ALSO MADE AT PEKING WITH THE PICTURESQUE KALGAN LINE, "THE ROAD TO THE GREAT WALL."

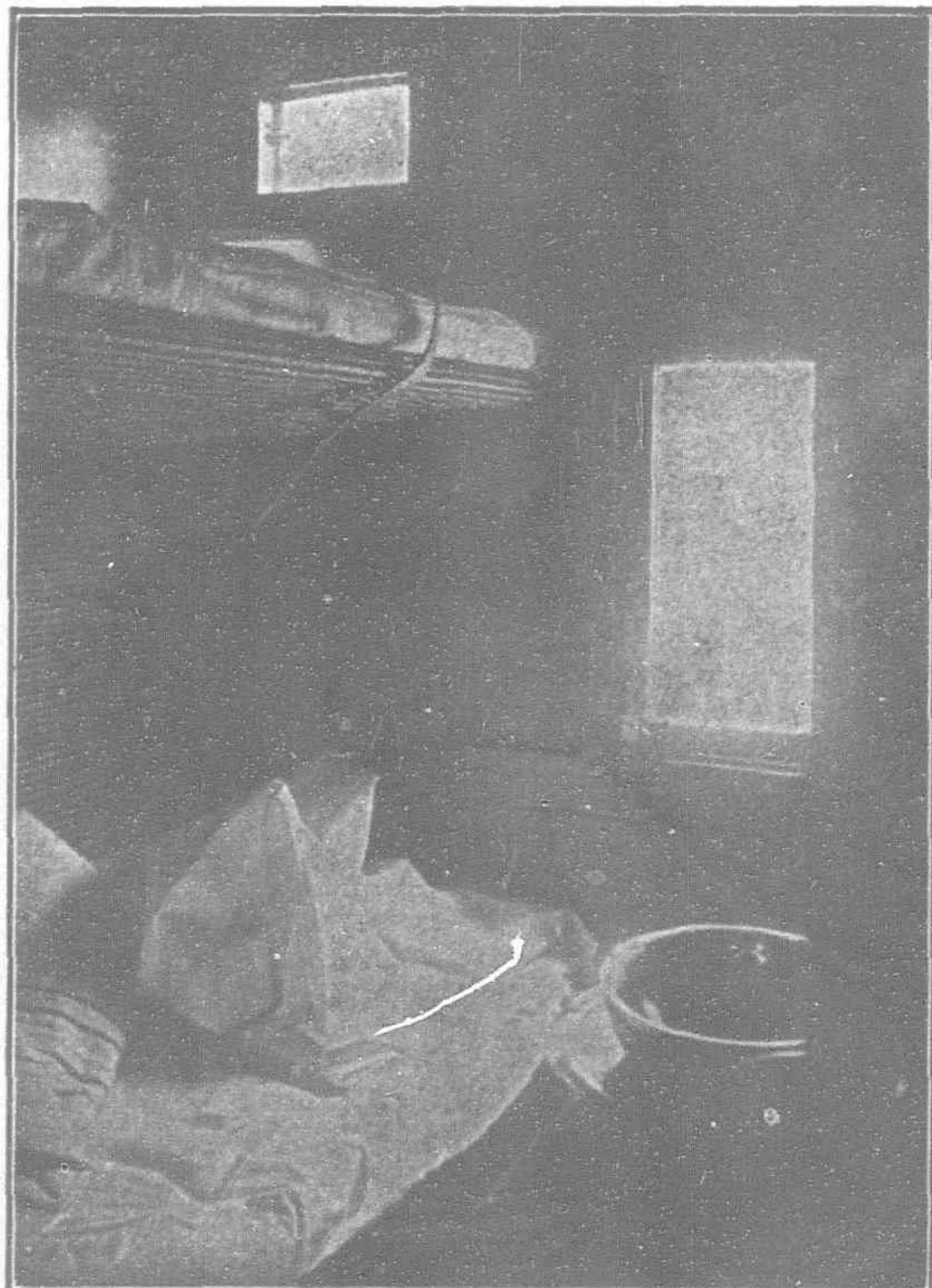


THE RAILWAYS OF NORTH CHINA PASS THROUGH THE MOST INTERESTING PART OF CHINA

PEKING: THE CAPITAL, WITH ITS WALLS, PALACES, TEMPLES AND TOMBS.—**TIENTSIN:** THE GREAT TRADE CENTER OF NORTH CHINA.—**TONGSHAN:** THE LARGEST MINING AND INDUSTRIAL TOWN IN THE COUNTRY.—**SHANHAI-KWAN:** WHERE THE GREAT WALL ENDS AT THE SEA.—**NEW-CHWANG:** THE BUSY COMMERCIAL PORT OF MANCHURIA.—**MUKDEN:** THE ANCESTRAL HOME OF THE MANCHU DYNASTY. A MINIATURE PEKING, WITH ITS WALLS, IMPERIAL PALACES, TEMPLES AND TOMBS.



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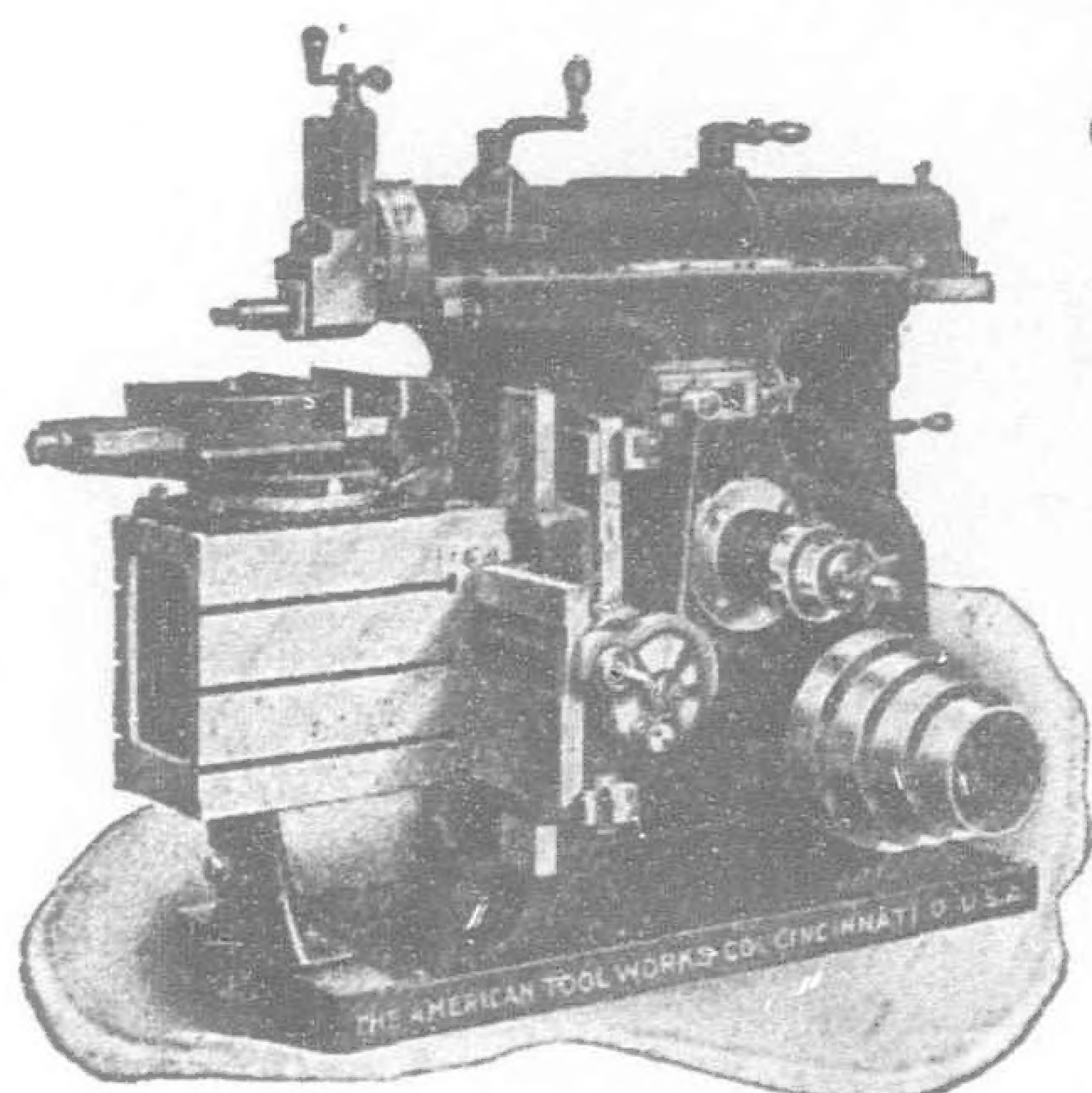
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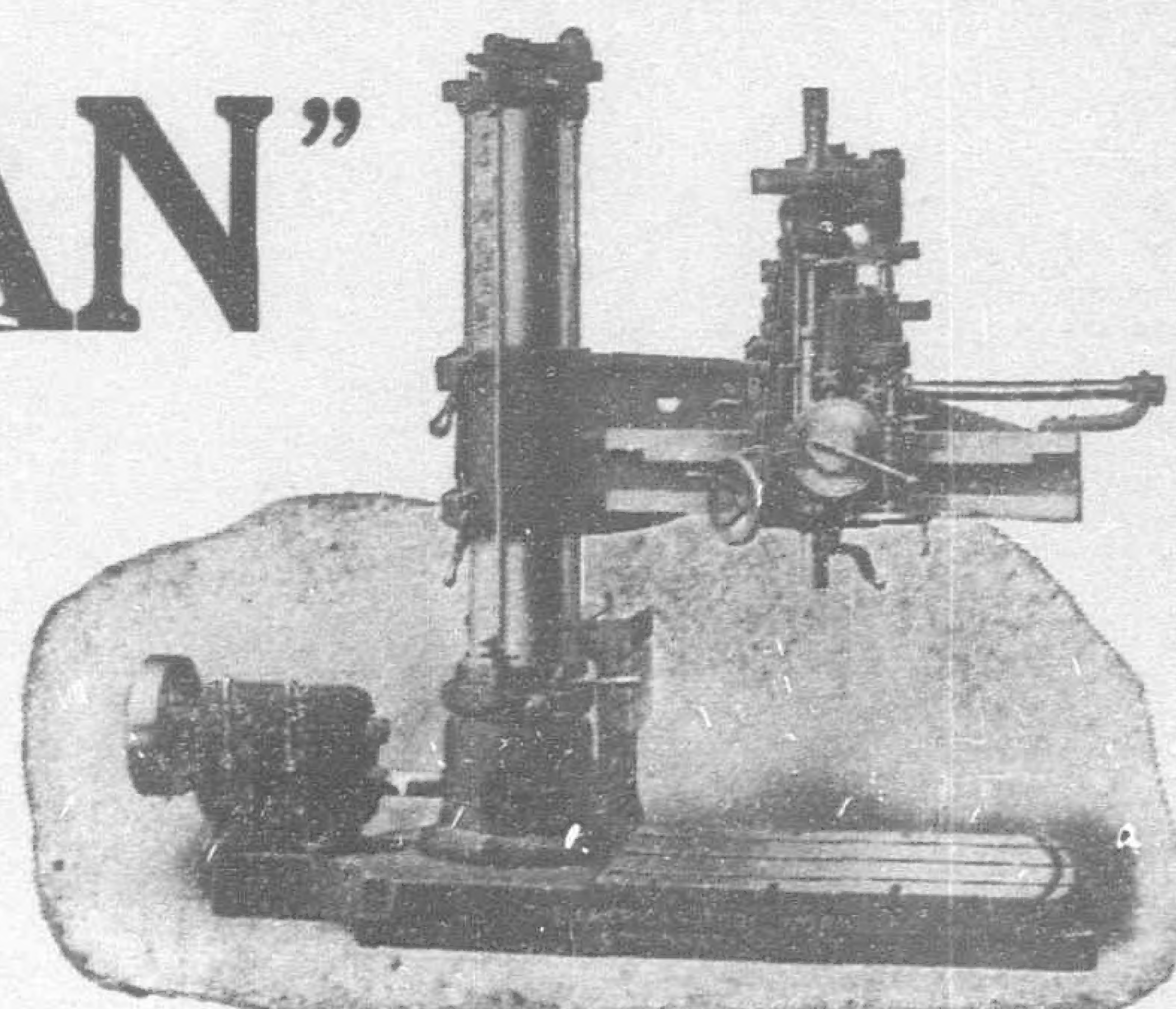
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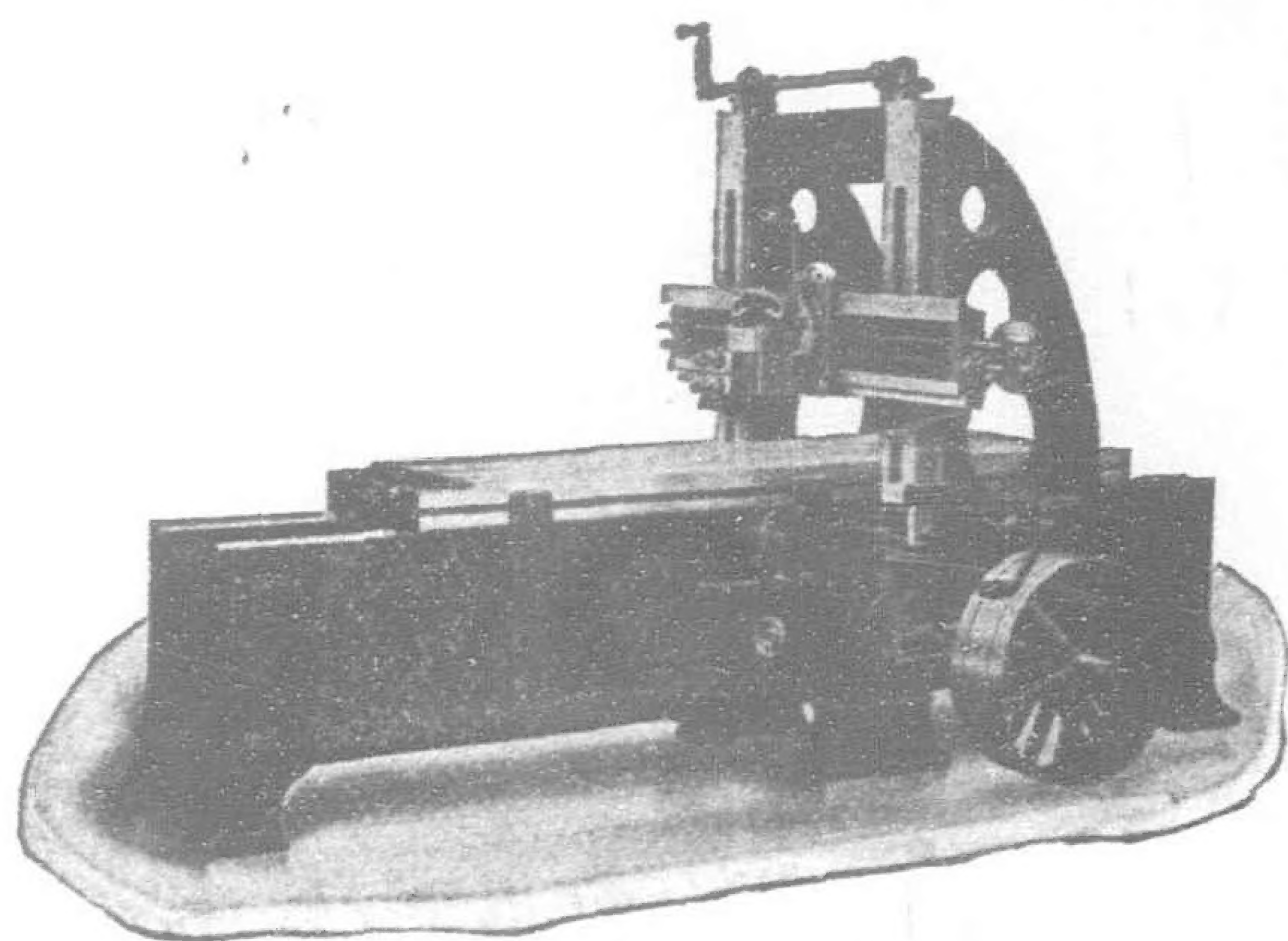
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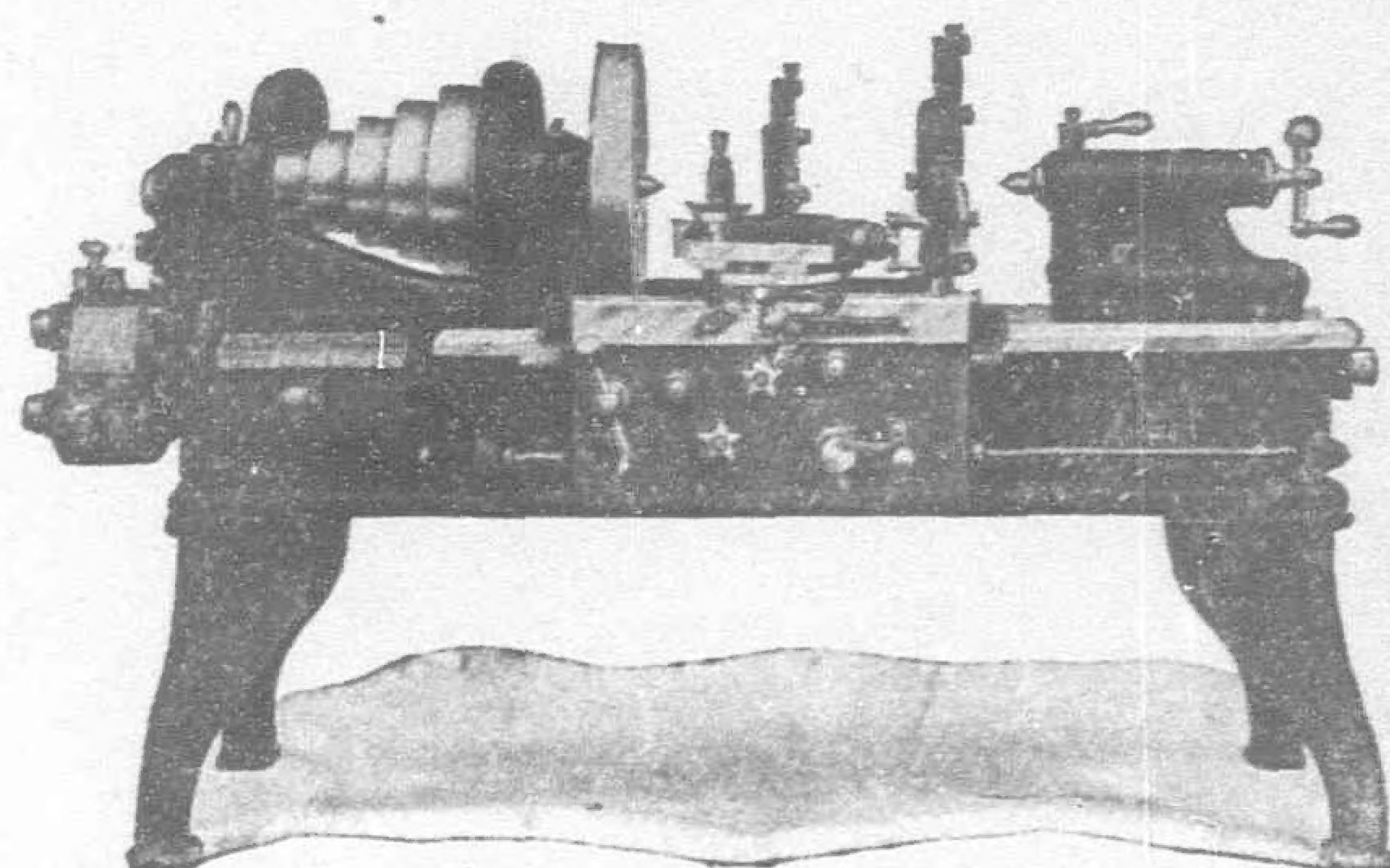
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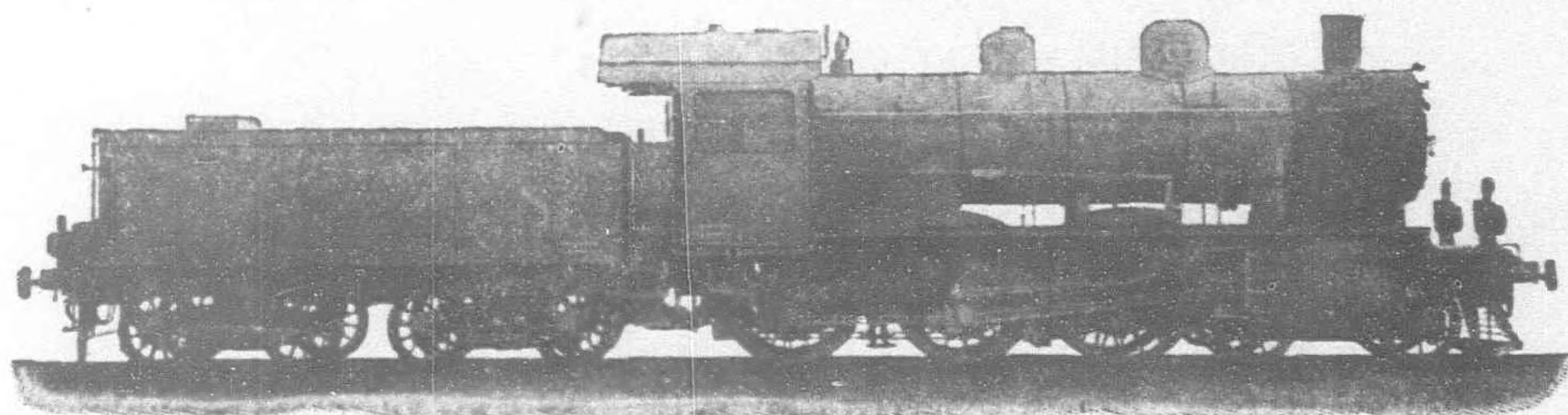
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of every Description, especially with Superheaters

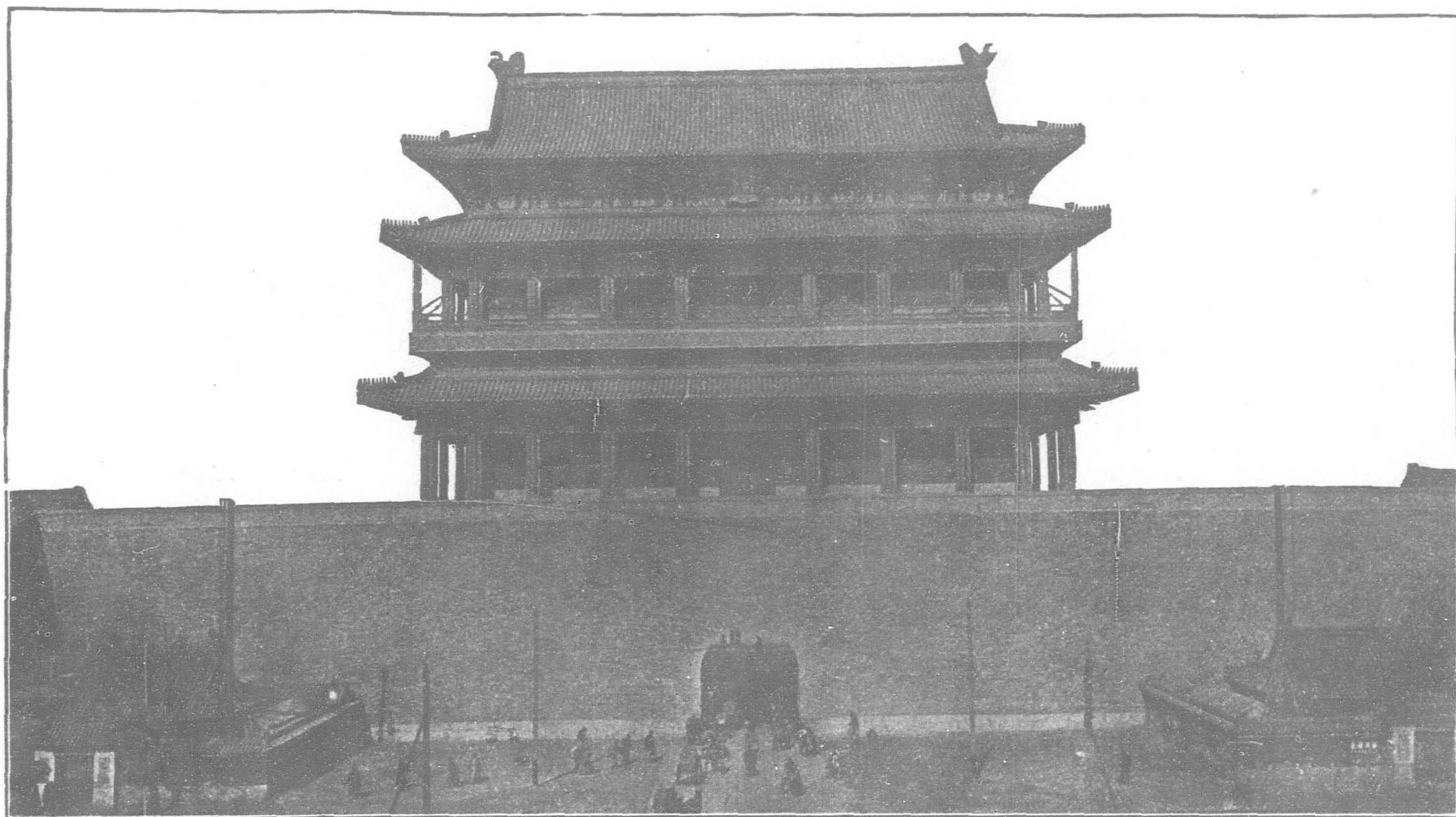


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THE CHIEN MEN GATE, PEKING, TERMINUS OF THE PEKING-HANKOW LINE

CHINESE GOVERNMENT RAILWAYS

PEKING-HANKOW LINE

"THE ROAD THROUGH THE HEART OF CHINA"

Avoid the Cold and Rough Weather in the Sea Trip between Shanghai and the North by the more comfortable Route up the Yangtsze to Hankow, and from there via the Ching-Han Railway to Peking, where through connections for Europe are made with the Trains de Luxe of the Government Railways of North China.

This line passes through the Heart of the Country and enables the traveller to and from Europe to catch a glimpse of Old China. Ancient walled cities, temples and pagodas are seen from the comfortable seats of the weekly trains de luxe operated by this line. From Peking, the great capital of the oldest civilization in the world, the train departs from the famous Chien-Men and carries the traveller through the historical and legendary portions of the Country, to the modern industrial center at Hankow—the Chicago of China. Connections are made with the Cheng-Tai Railway at Chengtingfu, with the Tao-Ching Line at Sin Siang-sien, and at Chengchowfu with the Pienlo Line.

A weekly express train de luxe leaves Peking every Tuesday, and Hankow every Friday, making the trip of over 700 miles in less than thirty hours.

For information apply to any office of the International Sleeping Car Co. or Thos. Cook and Sons.



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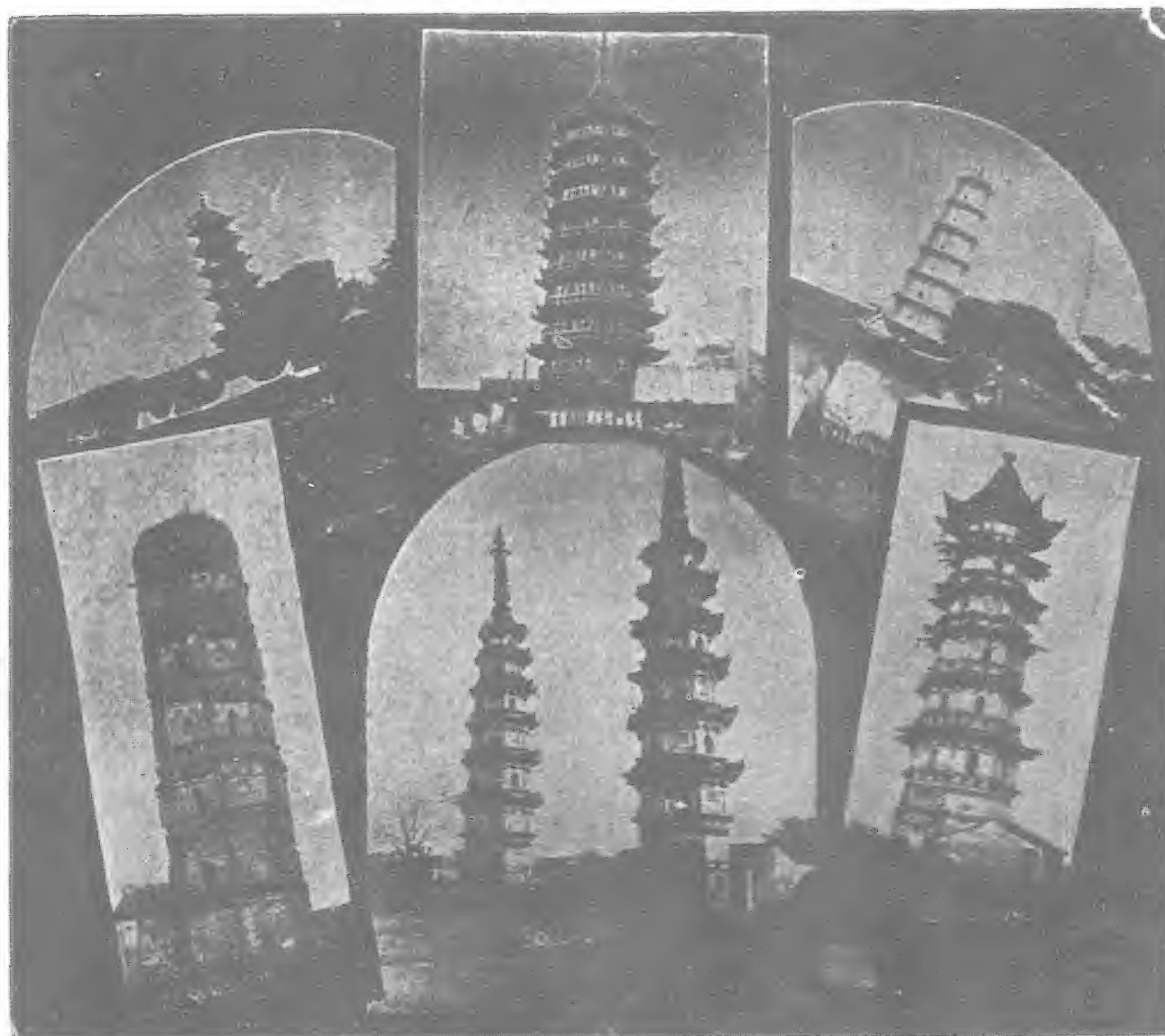


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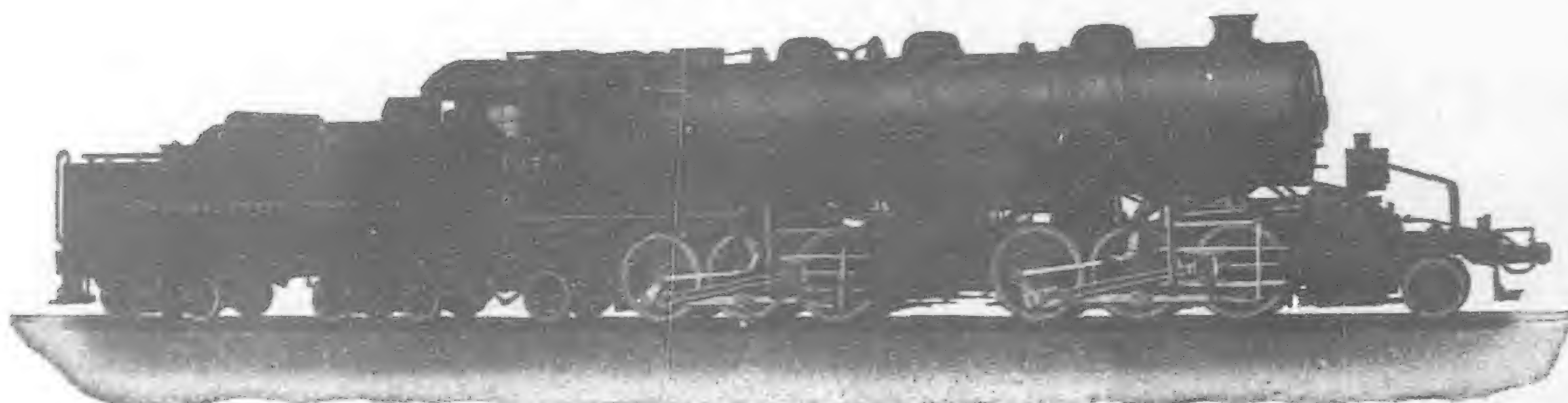


DELIGHTFUL
WEEK
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EXCURSIONS

SOME OF THE PAGODAS ALONG THE LINE OF THE S. N. R.

MALLET LOCOMOTIVES

DEVELOPED BY TESTS



MALLET LOCOMOTIVE, BUILT FOR NEW YORK CENTRAL & HUDSON RIVER RAILROAD

Total Weight of Engine, 354,000 Pounds; Weight of Drivers, 301,500 Pounds; Diameter of Drivers, 57 Inches; Boiler Pressure, 200 Pounds; Cylinders, $21\frac{1}{2}$ and 34×32 Inches. Maximum Tractive Power, 67,500 Pounds

Twenty-six Mallets are handling the entire slow freight traffic on Pennsylvania Division of the New York Central & Hudson River Railroad. They have increased track capacity 40 per cent without double tracking; reduced overtime 80 per cent; and decreased motive power investment \$78,000.00.

This Mallet design was developed by experience and exhaustive tests. Each feature of the design, and the economical performance as a whole, was thoroughly analyzed. The tests, resulting in this particular design, were made by experts from two of the largest railroad systems, in conjunction with our own engineers. The analysis of the results therefore lends exceptional weight to the final conclusions. These conclusions were not based on one test only. The investigation extends over two and a half months. Each improvement recommended was made, and tested separately, and its value definitely determined.

From these tests, the purchasers of our Mallets profit through the higher efficiency to which the design has been developed.

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BETWEEN THE FAR EAST
AND EUROPE**



THE SOUTH MANCHURIA EXPRESS

Shanghai to London	in 13½ days
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South Manchuria Railway



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THRICE WEEKLY EXPRESS TRAINS.—Composed of excellently equipped SLEEPING, DINING, and 1st CLASS CARS. Operated between DAIREN and CHANGCHUN in connection with the TRANS-SIBERIAN ROUTE and SHANGHAI MAIL STEAMERS.



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CONNECTIONS AT MUKDEN.—These Express Trains connect at MUKDEN with the PEKING-MUKDEN RAILWAY running via TIENSIN and with the newly organized MANCHURIA-CHOSEN THRICE WEEKLY EXPRESS SERVICE between Changchun and Fusan; the MUKDEN-ANTUNG LINE (now running throughout on standard gauge) connecting with the KOREAN RAILWAY; by this route the journey between Europe and Japan is shortened by two days, and the sea voyage considerably reduced.

OTHER STEAMER CONNECTIONS AT DAIREN.—Regular Steamship Services are maintained from DAIREN to MOJI, KOBE, CHEMULPO, TIENSIN, CHEFOO, TSINGTAU, and other ports in Japan and China.

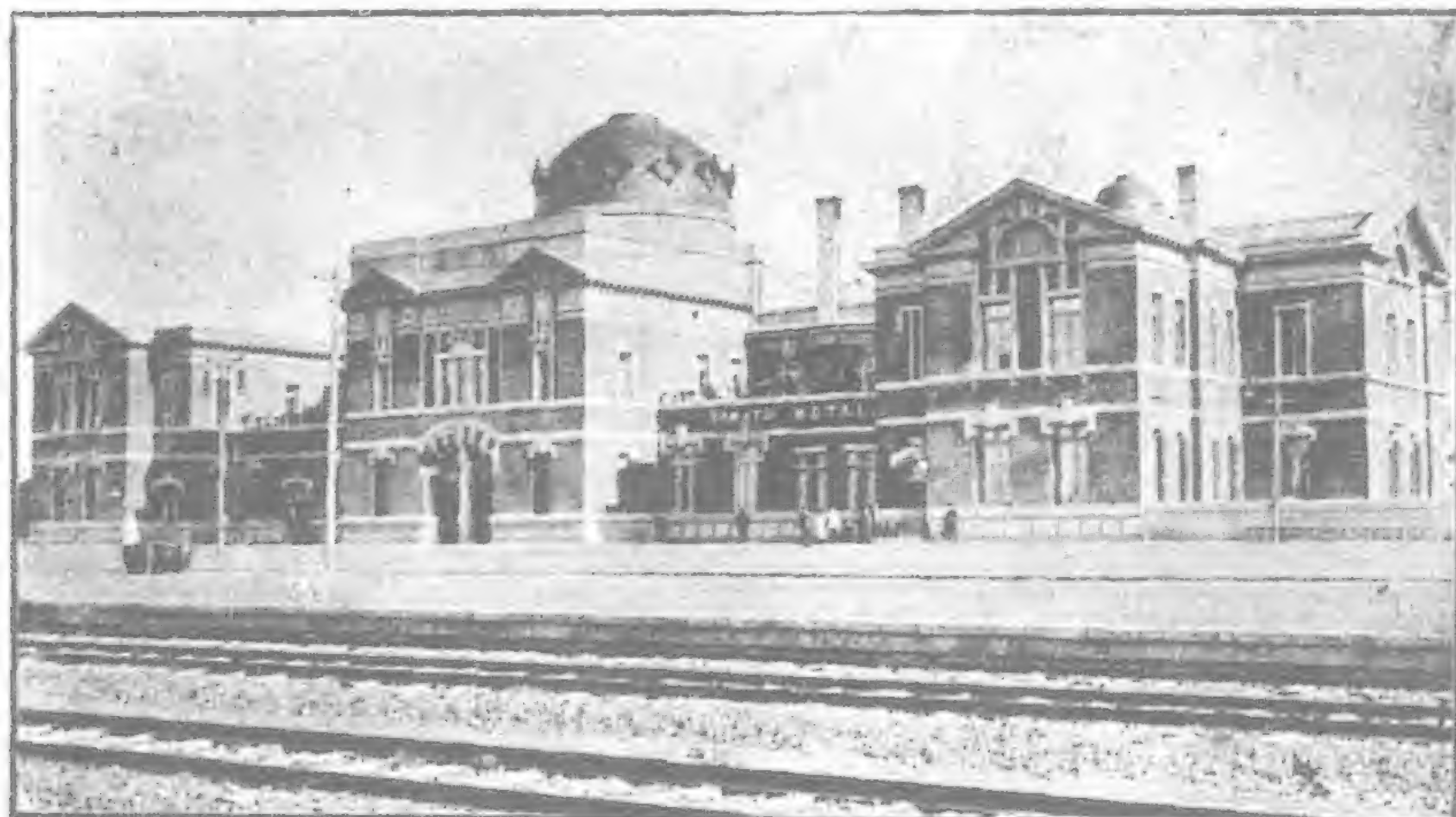


S. M. R. YAMATO HOTEL HOSHIGAUHA (STAR BEACH)

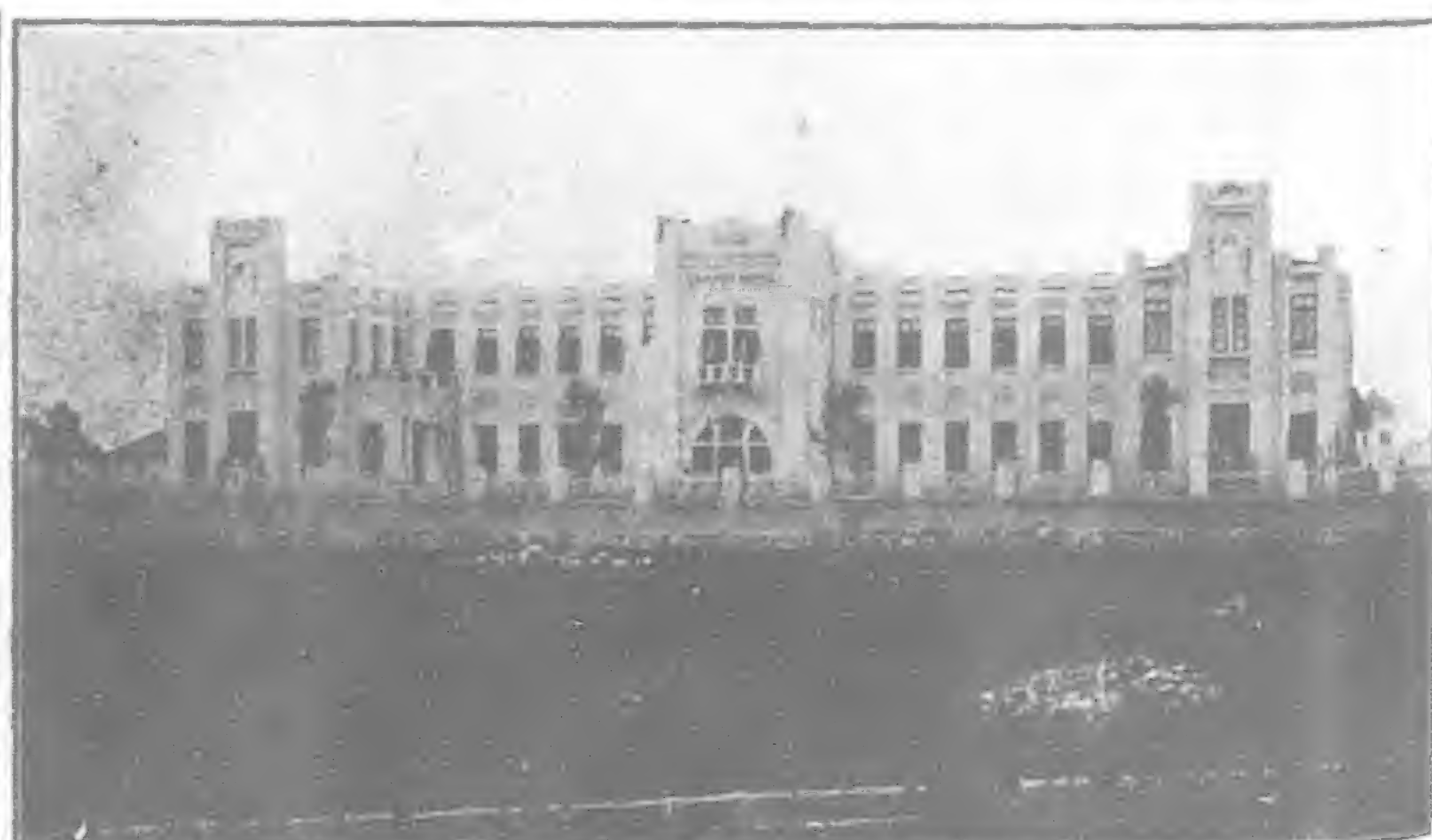
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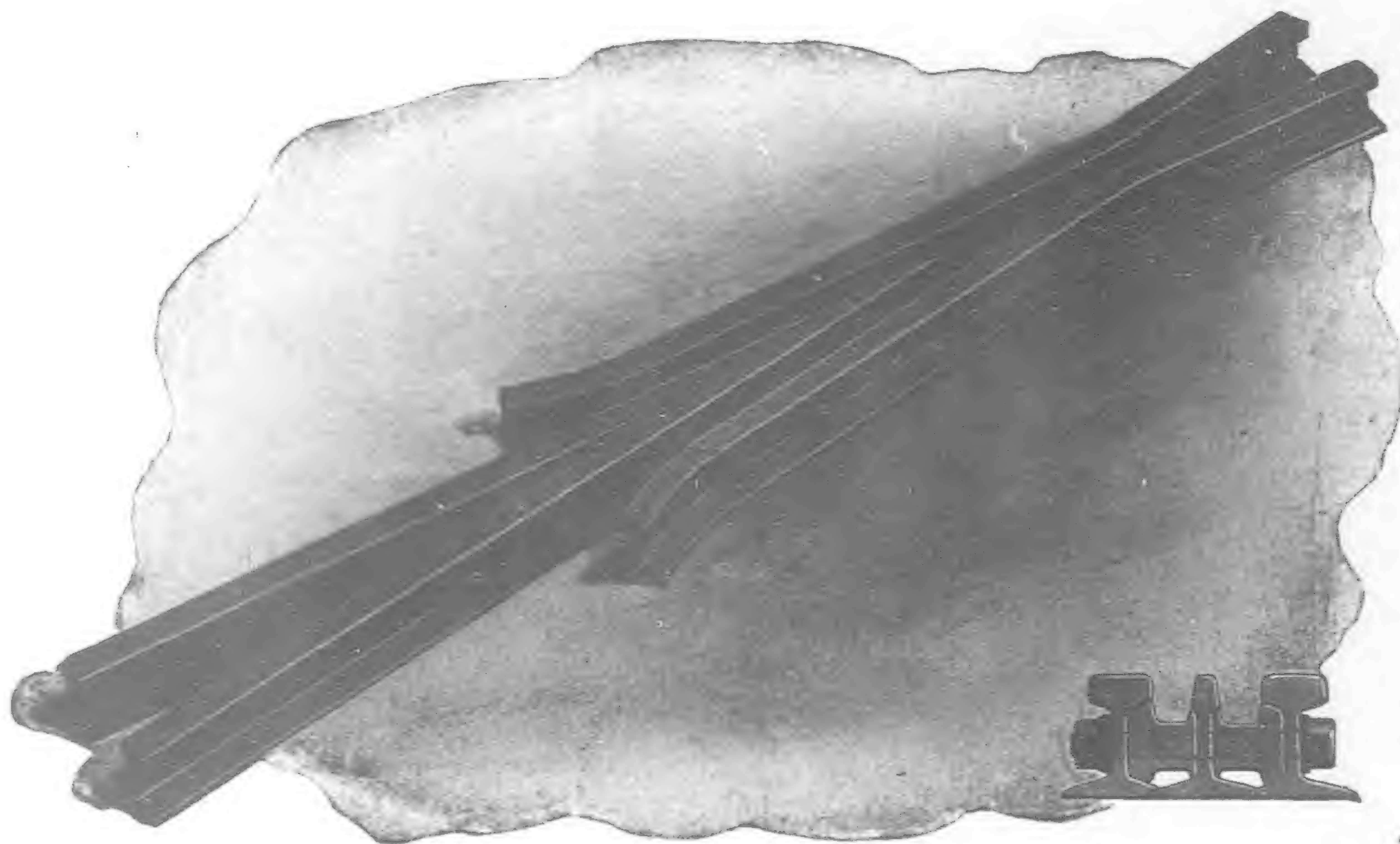
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The Chosen-Manchuria Express Train with excellent 1st Class Sleeping, 2nd Class Sleeping and Dining Cars, runs thrice a week between Fusan and Changchun, connecting in the south with trains to or from Tokyo, Yokohama, Kobe, Nagasaki, etc., at Shimonoseki or Moji through the ferry service between Fusan and Shimonoseki and in the north with the Trans-Siberian Express at Changchun.

TO TOKYO VIA CHOSEN

FROM

Mukden	2½	days
Peking	4	"
Harbin	3	"
Moscow	11	"
Berlin	13	"
Paris	14	"
London		

Daily Express Service

Fusan-Keijyo (Seoul)-Antung-Mukden

Two Daily Express Trains composed of 1st, 2nd and 3rd Class Cars run between Fusan and Antung, and take Dining and Sleeping Cars on the necessary sections. One of these trains runs conjointly with the train on the Antung-Mukden line, thus providing the through service between Fusan and Mukden.



EXPRESS TRAIN LEAVING THE FUSAN PIER.



A STREET IN KEIJYO (SEOUL)

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Through Booking of Passengers and their Luggage to or from Harbin, Manchuria, Vladivostock, Tientsin, Peking, etc., is dealt with at principal stations on lines of the Chosen Railway.

Hotels

Under the direct management of the Railway.

Fusan Station Hotel.

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Good Accommodation, Best Attendance, Moderate Charge.

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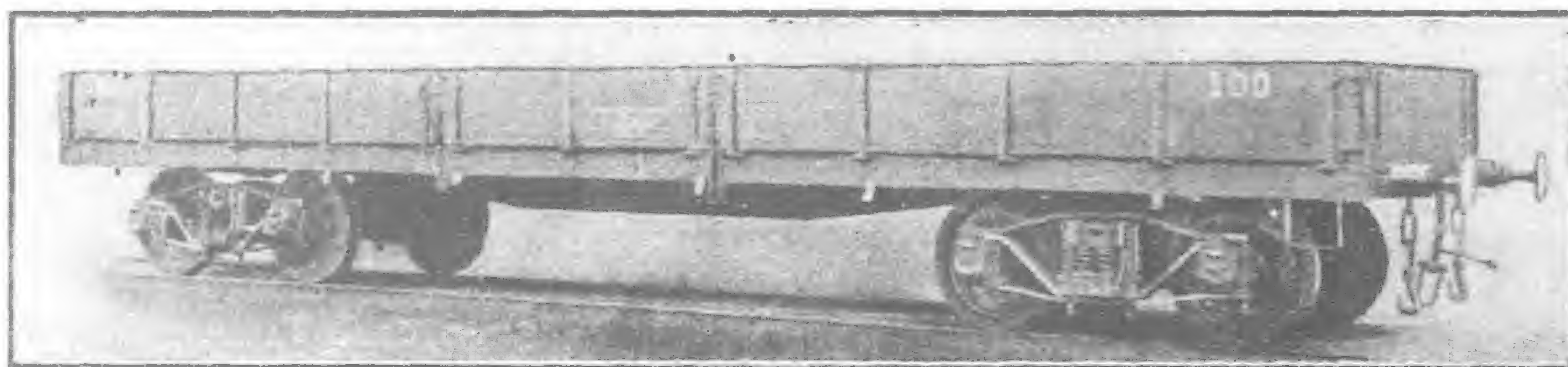
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OUTPUT { 150,000 FREIGHT CARS
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COMPARTMENT SLEEPING CAR FOR EUROPEAN SERVICE

Gauge 4'-8½" (1,435 M.); Body Length 59'-6" (16,430 M.); Capacity 20 Persons; Weight 80,000 lbs. (36,400 K.)



DROP SIDE GONDOLA CAR USE IN BRAZIL

Gauge 5'-3" (1,600 M.); Body Length 39'-4" (11,988 M.); Capacity 60,000 lbs. (27,300 K.); Net Weight 33,140 lbs. (15,000 K.)

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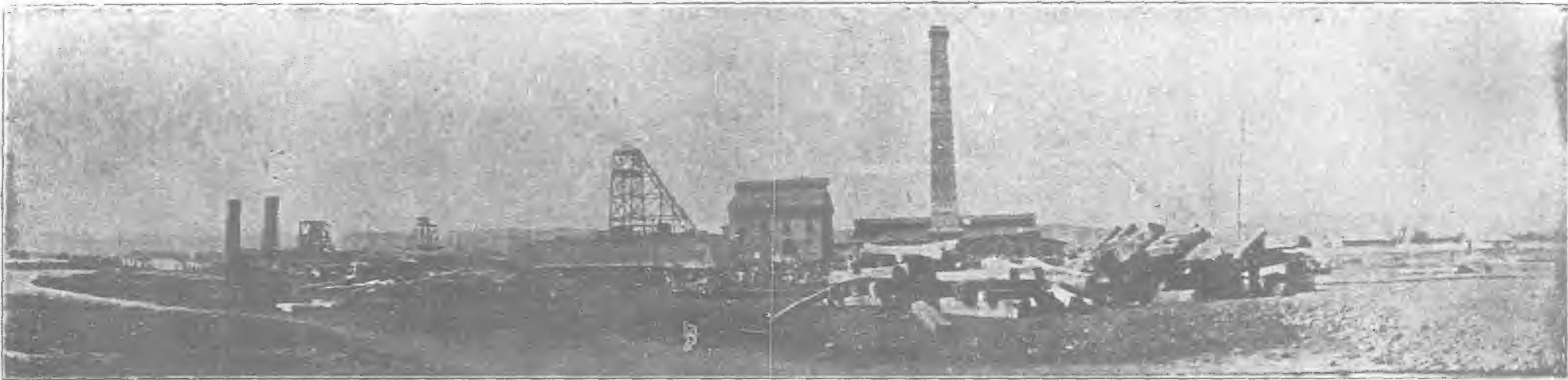
American Car and Foundry Export Company
165 BROADWAY NEW YORK

CHINESE GOVERNMENT RAILWAYS

THE TAO-CHING RAILWAY

TAOKOU TO CHINGHUA

(CHINESE GOVERNMENT HONAN LINE)



GENERAL VIEW OF COAL MINES ON THE LINE OF THE TAO-CHING RAILWAY

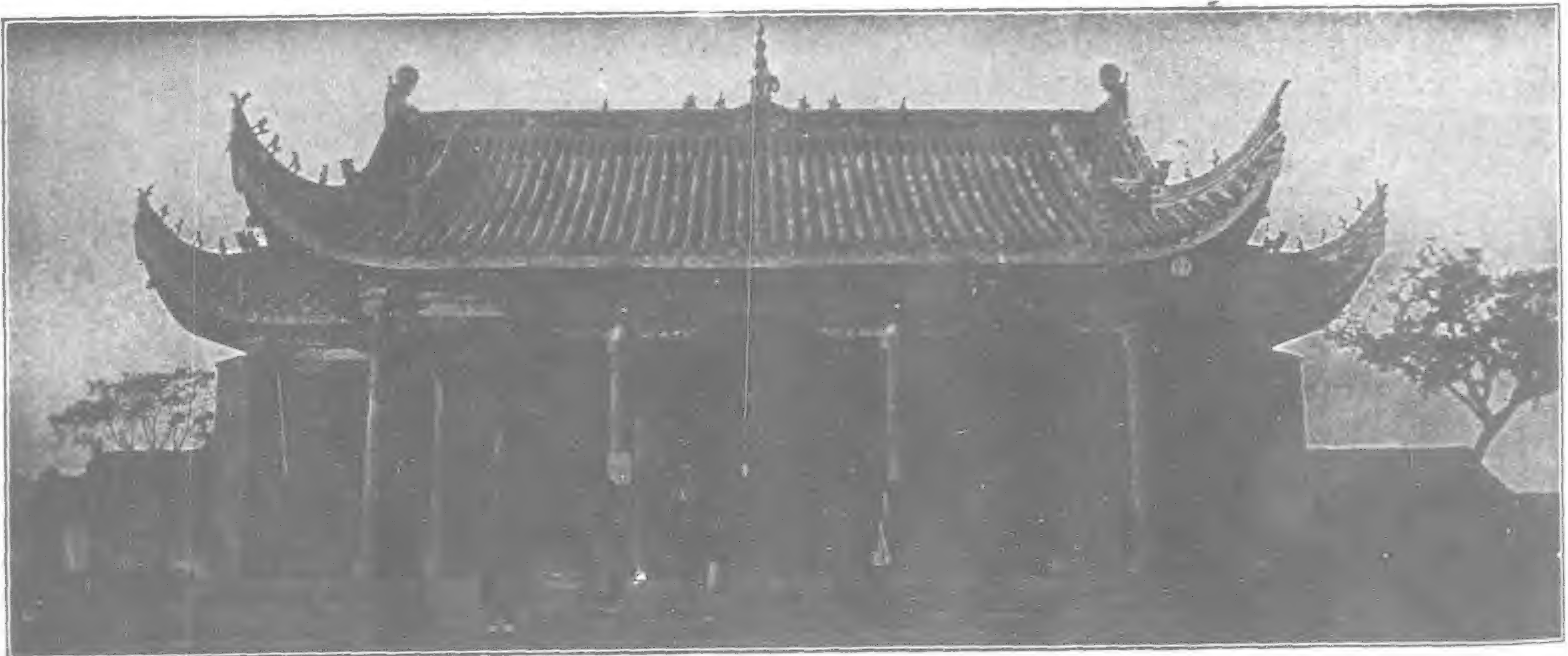
"China's Road of Anthracite"

THE TRAINS OF THIS LINE CONNECT AT SIN-SIANG-SIEN WITH THE THROUGH SERVICE OF THE PEKING-HANKOW RAILWAY. IT TAPS THE GREAT ANTHRACITE COAL DEPOSITS OF SHANSI, AND CONVEYS THE PRODUCTS OF THE MINES TO THE NEAREST NAVIGABLE RIVER.

THE PIENLO RAILWAY

(KAIFENG-FU TO HONAN-FU)

"THE FIRST SECTION OF THE PROJECTED CENTRAL TRUNKLINE"

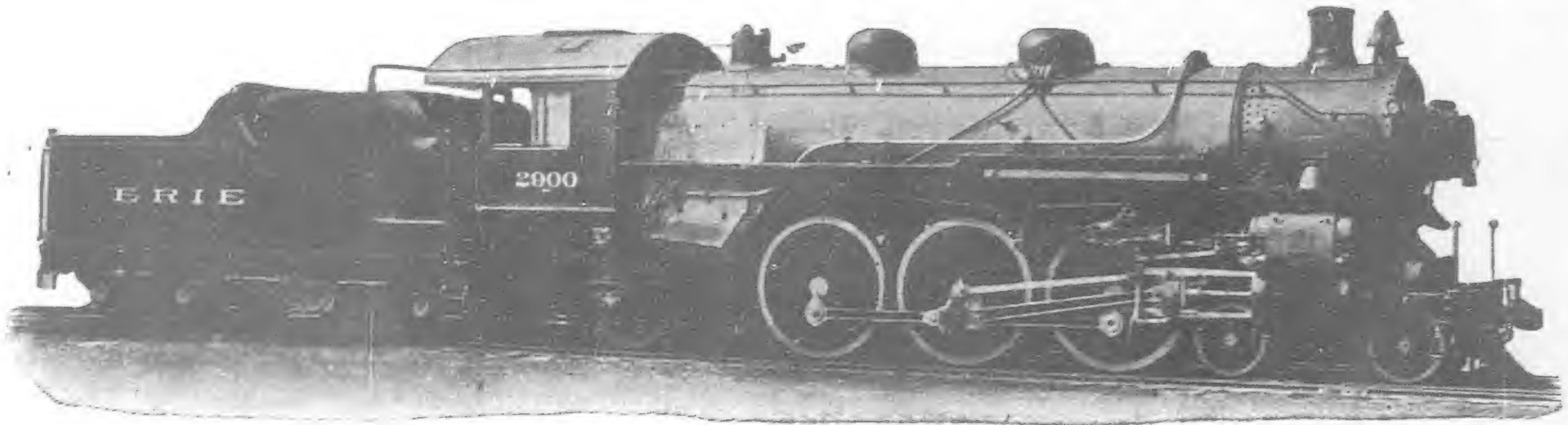


CHUNG-HUAN TEMPLE, KAIFENG-FU.

The line connects with the through service of the Peking-Hankow Railway at Tcheng Tchéou, enabling the traveller to visit Kaifengfu, the provincial capital of Honan, and the old capital of the Empire at Honanfu.

Lima Locomotive Corporation

Builders of all Classes Motive Power. Capacity 1,000 per year



Heavy Pacific Type Built for Erie Railroad

LIMA HEAVY PACIFIC TYPE

This locomotive combines the latest improvements and developments in design, materials and economic devices for saving fuel, etc.

Built for the **ERIE RAILROAD** for heavy fast passenger service where maximum capacity was desired.

GENERAL DIMENSIONS AS FOLLOWS:

Cylinders, 27 × 28 inches
Driving wheel base, 14 ft.
Total Wheel base, 36 ft. 2 inches
Drivers, diameter 79 inches
Boiler, straight locomotive type
Boiler, diameter 79 inches

Weight on drivers, 176,000 lbs.
Total Weight, 287,000 lbs.
Tractive Power, 40,700 lbs.
Factor Adhesion, 4.24
Superheater, Schmidt
Valve motion, Baker

Our **PLANT** is equipped with the latest and most improved machinery, which enables us to build any type or size locomotive required.

Write our Agents for any information you desire and a copy of our catalogue.

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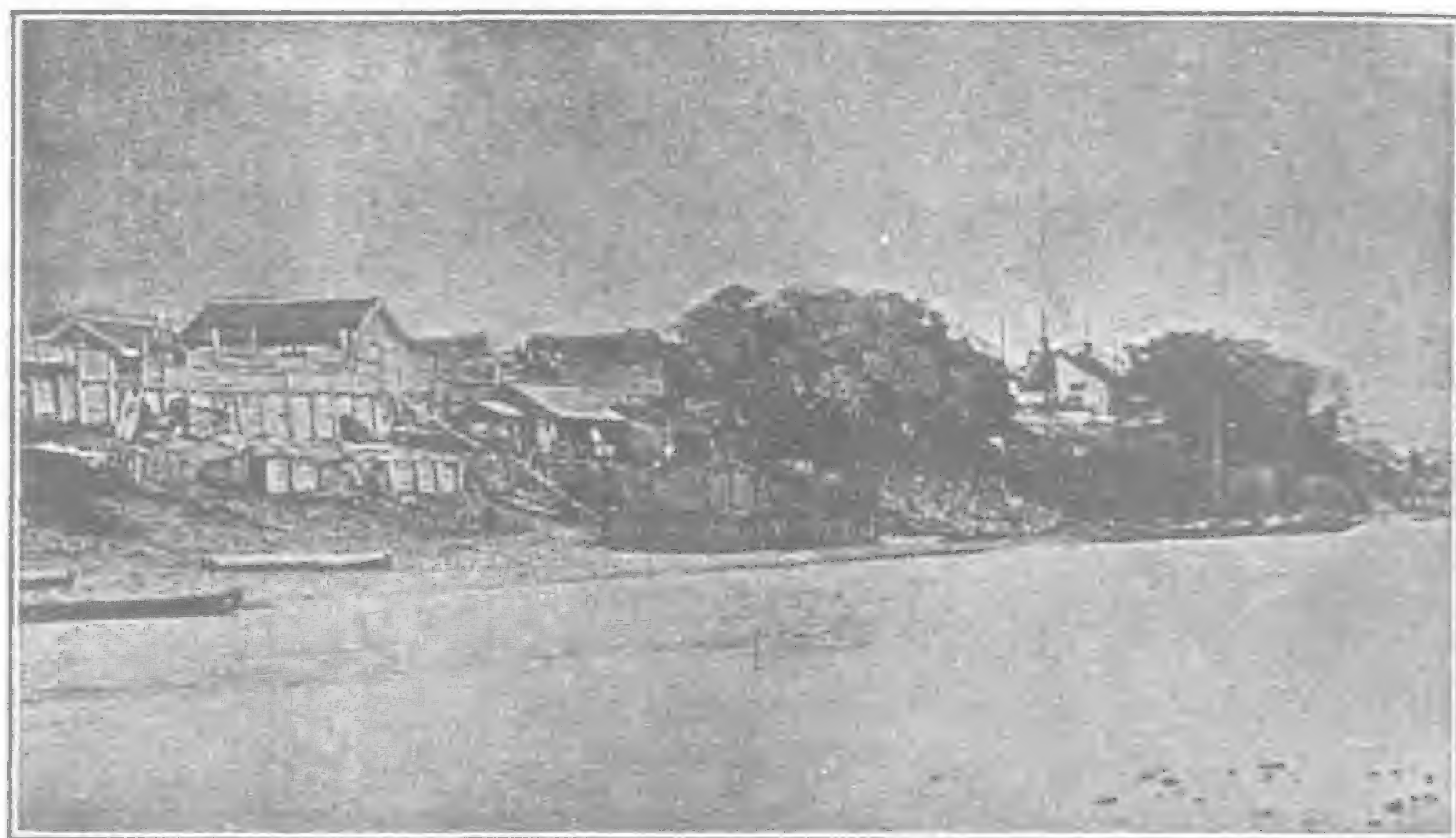
中華民國政府吉長鐵路行車時刻表

CHINESE GOVERNMENT RAILWAYS

KIRIN-CHANG CHUN LINE



CHINESE MARKET AT CHANG-CHUN



VIEW OF KIRIN FROM THE SUNGARI RIVER

TIME TABLE OF PASSENGER, GOODS AND CONSTRUCTION TRAINS

下行車次數

NUMBER OF DOWN TRAINS

上行車次數

NUMBER OF UP TRAINS

站名 NAME OF STATION				No. 1	No. 3	No. 5	No. 7	No. 9	站名 NAME OF STATION				No. 2	No. 4	No. 6	No. 8	No. 10
頭 T.	道 T.	溝 K.	arr. dept.	8.30	18.15				樺 H.	皮 P.	廠 C.	arr. dept.	13.50 No. 9		8.00	10.30	14.10
長 C.		春 C.	arr. dept.	8.45 9.00	18.30	3.30	6.00	9.30	土 T.	門 M.	嶺 L.	arr. dept.	14.50 15.00		9.00 No. 7 9.05	11.30 No. 1 11.47	15.10 15.20
安 A.	龍 L.	泉 C.	arr. dept.	pass 9.10		pass 3.45	pass 6.15	pass 9.45	馬 M.	鞍 A.	山 S.	arr. dept.	15.13 15.15		9.25 9.30	12.07 No. 9 12.12	15.35 15.45
卡 K.		倫 L.	arr. dept.	9.35 9.40		pass 4.15	pass 6.45	10.15 10.20	營 Y.	城 C.	子 J.	arr. dept.	15.28 15.33		pass 10.05	pass 12.27	16.00 16.05
飲 Y.	馬 M.	河 H.	arr. dept.	10.15 10.25		4.55 5.05	7.25 7.35	11.00 No. 6 11.05	下 H.	九 C.	台 J.	arr. dept.	15.46 15.48		10.35 No. 1 10.43	pass 12.42	16.20 16.22
下 H.	九 C.	台 J.	arr. dept.	10.40 No. 6 10.42		pass 5.23	pass 7.55	11.22 11.25	飲 Y.	馬 M.	河 H.	arr. dept.	16.03 16.13		11.01 No. 9 11.10	12.59 13.07	16.40 16.50
營 Y.	城 C.	子 J.	arr. dept.	10.55 11.00		pass 5.38	pass 8.10	11.40 11.50	卡 K.		倫 L.	arr. dept.	16.53 16.58		pass 11.55	pass 13.52	17.35 17.40
馬 M.	鞍 A.	山 S.	arr. dept.	11.13 11.15		5.53 6.00	8.25 8.30	12.05 No. 8 12.10	安 A.	龍 L.	泉 C.	arr. dept.	pass 17.23		pass 12.25	pass 14.22	pass 18.10
土 T.	門 M.	嶺 L.	arr. dept.	11.35 No. 8 11.45		6.25 6.35	8.55 No. 6 9.02	12.35 12.45	長 C.		春 C.	arr. dept.	17.33 17.45	8.00	12.40	15.37	18.25
樺 H.	皮 P.	廠 C.	arr. dept.	12.40		7.35	10.00	13.45 No. 2	頭 T.	道 T.	溝 K.	arr. dept.	18.00	8.15			

Nos. 1, 2, 3 and 4 are passenger trains. 第一, 二, 三, 四次係客車
 „ 9 and 10 „ goods „ 第九, 十次係貨車
 „ 5, 6, 7 and 8 „ construction „ 第五, 六, 七, 八次係工程車

Traffic Manager.

Ten-Wheelers for General Road Service

One of the most useful types of locomotive for general road service is the Ten-wheeled, or 4-6-0. The four-wheeled truck provides excellent guiding qualities, while a large proportion of the total weight of the engine is carried on the driving wheels and is available for adhesion. With medium sized driving-wheels such locomotives can be used in either freight or passenger service; or if desired the passenger locomotives can be fitted with larger wheels than the freight, the two classes being otherwise practically alike.



TEN-WHEELED LOCOMOTIVE, ATLANTIC COAST LINE R. R. CO.

Cylinders, 20" × 26"

Driving-wheels, diameter 63"

Steam Pressure, 200 lbs.

Grate Area, 44.1 sq. ft.

Water heating surface, 2,038 sq. ft.

Superheating surface, 400 sq. ft.

Weight on driving-wheels, 125,200 lbs.

Weight, total engine, 169,700 lbs.

Tractive Force, 28,100 lbs.

The illustration shows one of a large number of locomotives, which are in successful operation on the Atlantic Coast Line. These locomotives are equipped with brick arches and superheaters. They are usually employed in fast freight service, but can also be used in passenger service if desired. The boiler has a wide firebox with a large grate area, and consequently steams freely. This is an excellent example of an all-around locomotive for general road service where speeds and train loads are within its capacity.

Agents for China:—ARNHOLD, KARBERG & Co., SHANGHAI, TIENTSIN, HONGKONG and HANKOW

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THE BALDWIN LOCOMOTIVE WORKS

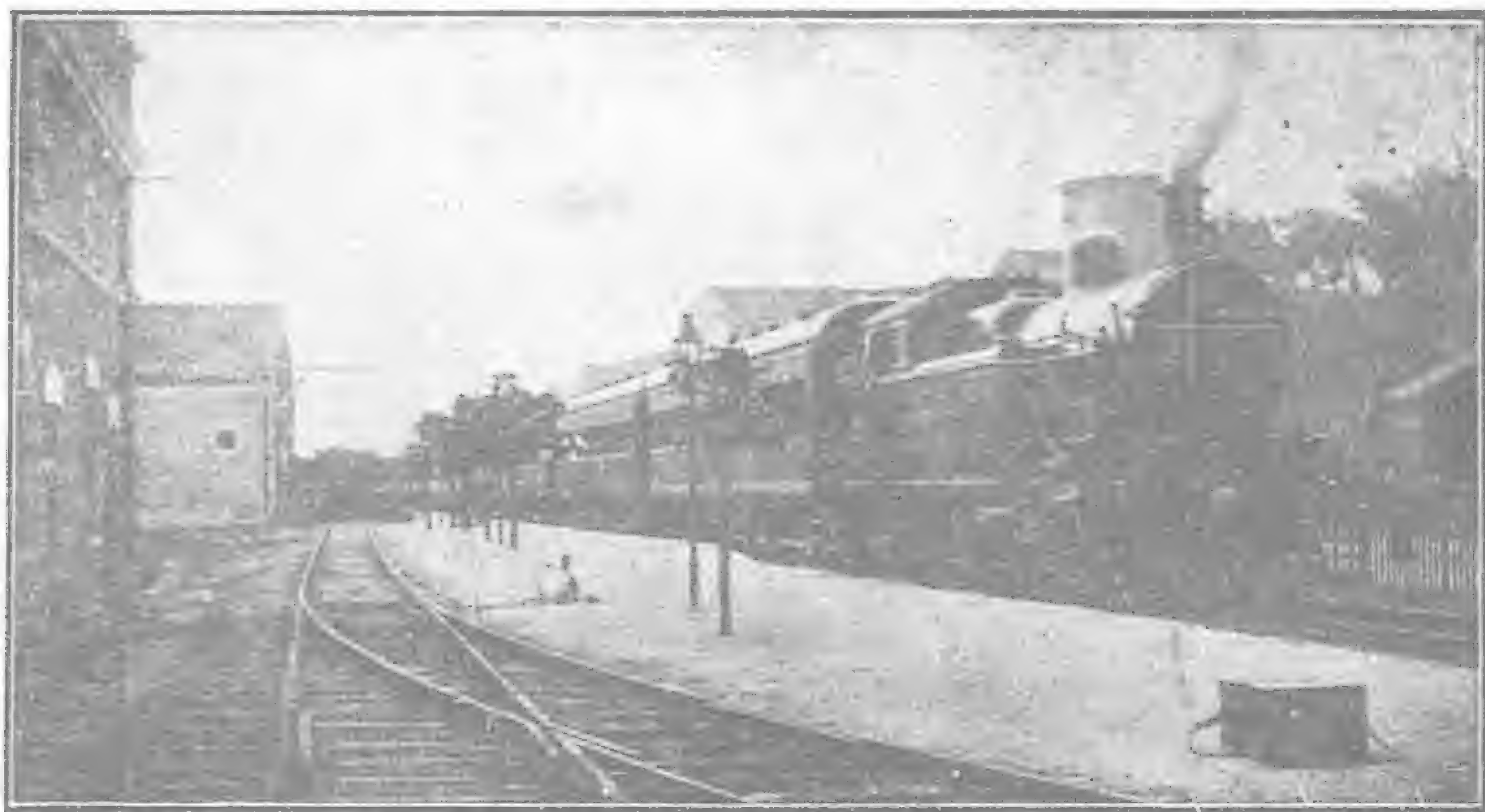
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VIEWS ON THE BRITISH SECTION (22 MILES)

VIEWS ON THE CHINESE SECTION, 89 MILES. (Chinese Government Railways)



TEMPORARY STATION AT KOWLOON



TAI SHA TAN STATION, CANTON

QUICKEST AND CHEAPEST ROUTE BETWEEN CANTON AND HONGKONG THROUGH VARIED AND BEAUTIFUL SCENERY



THE "EIGHT GENII RANGE" FROM TAI-PO



NEAR LE LOONG, CANTON-KOWLOON RAILWAY

TWO EXPRESS CORRIDOR TRAINS EACH WAY DAILY HOT MEALS AND OTHER REFRESHMENTS SERVED



THE HUNCH-RACKS AND PYRAMID HILL

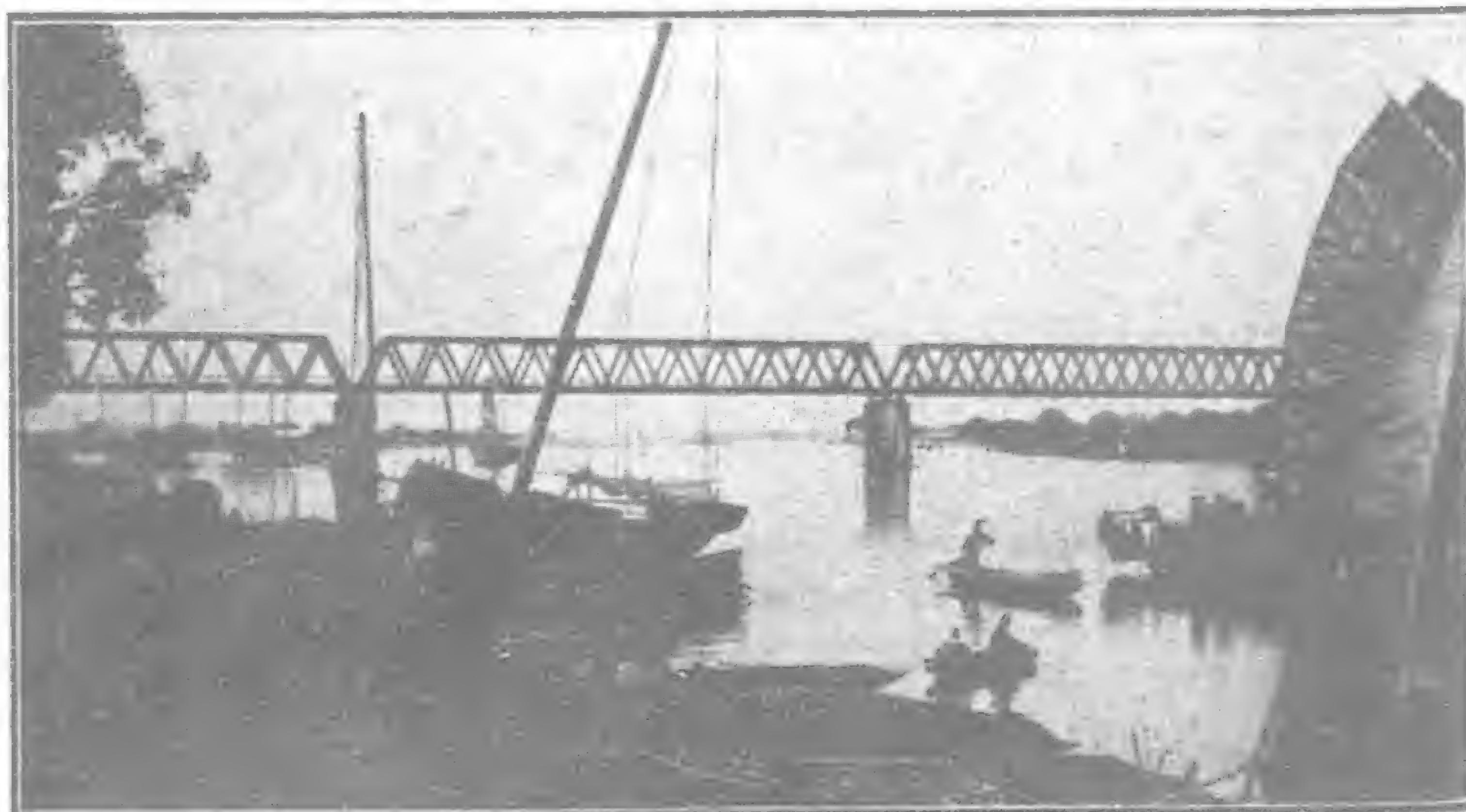


VILLAGES, CANTON-KOWLOON RAILWAY

4¼ HOURS BETWEEN UP AND DOWN TRAINS FOR BUSINESS MEN OR TOURISTS AT CANTON OR HONGKONG



THE LION'S HEAD AND STATUE ROCK, SHATIN VALLEY



EAST RIVER BRIDGE, CANTON-KOWLOON RAILWAY

SUMMER SEASON 1913.

Leave Hongkong (Kowloon) 7.15 a.m. 3.00 p.m.
Arrive Canton (Tai Sha Tou) 11.00 a.m. 6.41 p.m.

Leave Canton (Tai Sha Tou) 7.00 a.m. 3.15 p.m.
Arrive Hongkong (Kowloon) 10.43 a.m. 6.54 p.m.

Special terms and special trains for large tourist parties. For further particulars see advertisements or apply to
The Manager (British Section) Kowloon, HONGKONG.

The Administration, (Chinese Section) CANTON.

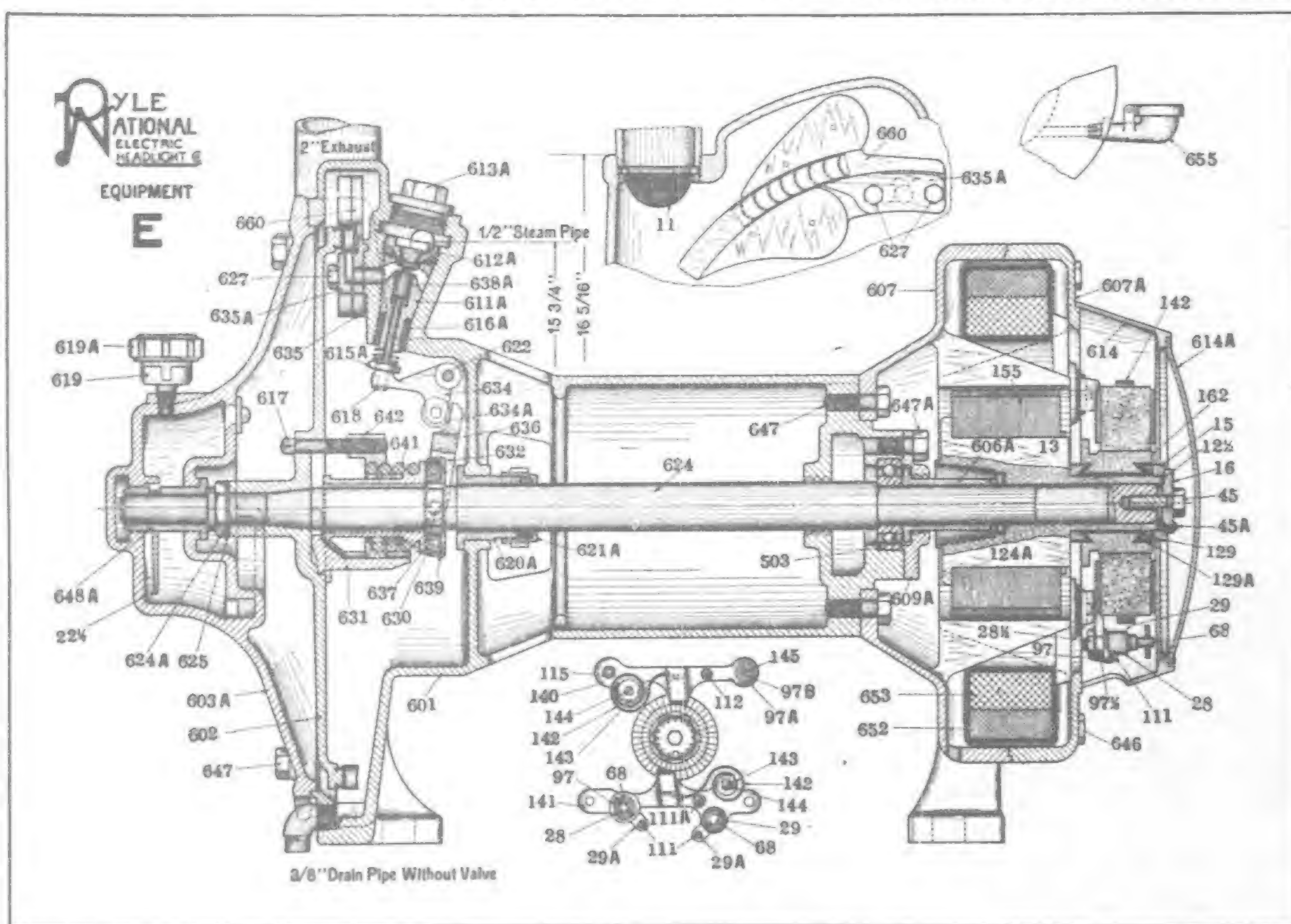
25,000 PYLE-NATIONAL ELECTRIC HEADLIGHTS IN SERVICE



Actual Photograph taken on the Chicago, Rock Island and Pacific R.R., with no other light but the Pyle-National Electric Headlight. The station seen is half a mile from the engine.

A Pyle-National Electric Headlight gives a Great Beam of Clear, Strong, Penetrating Light that distinctly illuminates the Track for Half a Mile Ahead of the Locomotive, enabling the Engine Driver to maintain Schedules, verify Signals and avoid Accidents.

Three Railroads are each operating more than 1,500 Pyle-National Headlights.
Four Railroads more than 1,000 each. Twelve Railroads more than 500 each.



Sectional View of Turbo-Generator

The universal use of Pyle-National Electric Headlights is a guarantee of their superior value. They are giving entire satisfaction on every continent, and are easily recognized by the powerful shaft of light. The special parabolic reflector is responsible for the bright shaft of light giving a reflected illumination of over 250,000 candle-power. The arc lamp is dependable, and is absolutely unaffected by weather conditions. The motor for the Pyle-National Electric Headlight is steam turbine driven, the latter having a guaranteed steam consumption less than that of any turbine in the world in similar service.

Mitsui Bussan Kaisha, Limited.
(Mitsui and Company)

Sole Agents for China, Japan, Korea, Manchuria and Siam.

Railway Materials Export Corporation.
149 Broadway, New York, U.S.A.

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PYLE-NATIONAL ELECTRIC HEADLIGHT COMPANY
900 So. Michigan Ave., Chicago, Ill., U.S.A.

Chinese Government Railways

The Cheng-Tai Railway

(CHINESE GOVERNMENT SHANSI LINE—CHENGTINGFU TO TAIYUANFU)



VIEWS ALONG ROUTE OF CHENG-TAI RAILWAY

The trains of this line connect with the through service of the Peking-Hankow Railway, affording Travellers the opportunity of seeing the most picturesque part of China. The line passes through a mountainous section of country, rich in Mineral Resources to the Provincial Capital of Shansi at Taiyuanfu. This interesting city is a great educational center, and famous for the fine quality of its artistic embroideries.

The Peking-Kalgan Line

"THE ROAD TO THE GREAT WALL"



Nankow Pass



Great Wall Nankow

This line follows the ancient caravan route and military highway from Mongolia into China by the way of the historic Nankow Pass. This pass is the Key to Peking, and Kalgan is the gate of the Country. From here the great camel caravans set out on their long journeys across Mongolia to Siberia and Central Asia. This old frontier mart, retaining its time-honored characteristics, one of the most interesting sights of the Old World, is made accessible by the new railway. The line also carries the passenger in two hours from Peking to Nankow, when the Great Wall of China and the Ming Tombs may be seen. A foreign hotel is operated by the railway authorities at Nankow, where chairs and guides may be secured for the Tombs.



Austin Sewer and Water Works Excavator

Austin Trench Excavators

with trench any material except ledge rock ; they will trench as much as 50 to 200 men ; they will stand up to work day after day.

They are made in many sizes, some for shallow trenches for tile laying, other big enough to dig trenches 20 feet deep and 6 feet wide or 27 feet deep and 5 feet wide with sizes in between to suit every digging need. They are made almost entirely of steel. The entire machine is mounted on a roller platform traction, which prevents miring even in ground so soft that a team could not be driven over it. Buckets are self-cleaning and have tool steel cutting edges. Special diggers or hardpan rooters are attached to the buckets where the earth is extremely hard.

The Austin Line

comprises sizes and styles of excavating machinery for construction of **open ditches** of various widths and depths, with sloping banks, for drainage or irrigation, and **canalization systems** for sewer, water and gas pipe lines.

Write for complete catalog No. 126-F and to avoid delays please describe the proposed work, giving dimensions of ditches and character of soil.

Responsible firms wanted to represent our interest in China, the Philippines and the Far East.

F. C. AUSTIN DRAINAGE EXCAVATOR COMPANY

Railway Exchange, Chicago, U.S.A.

Cable Address: "Excavate Chicago."

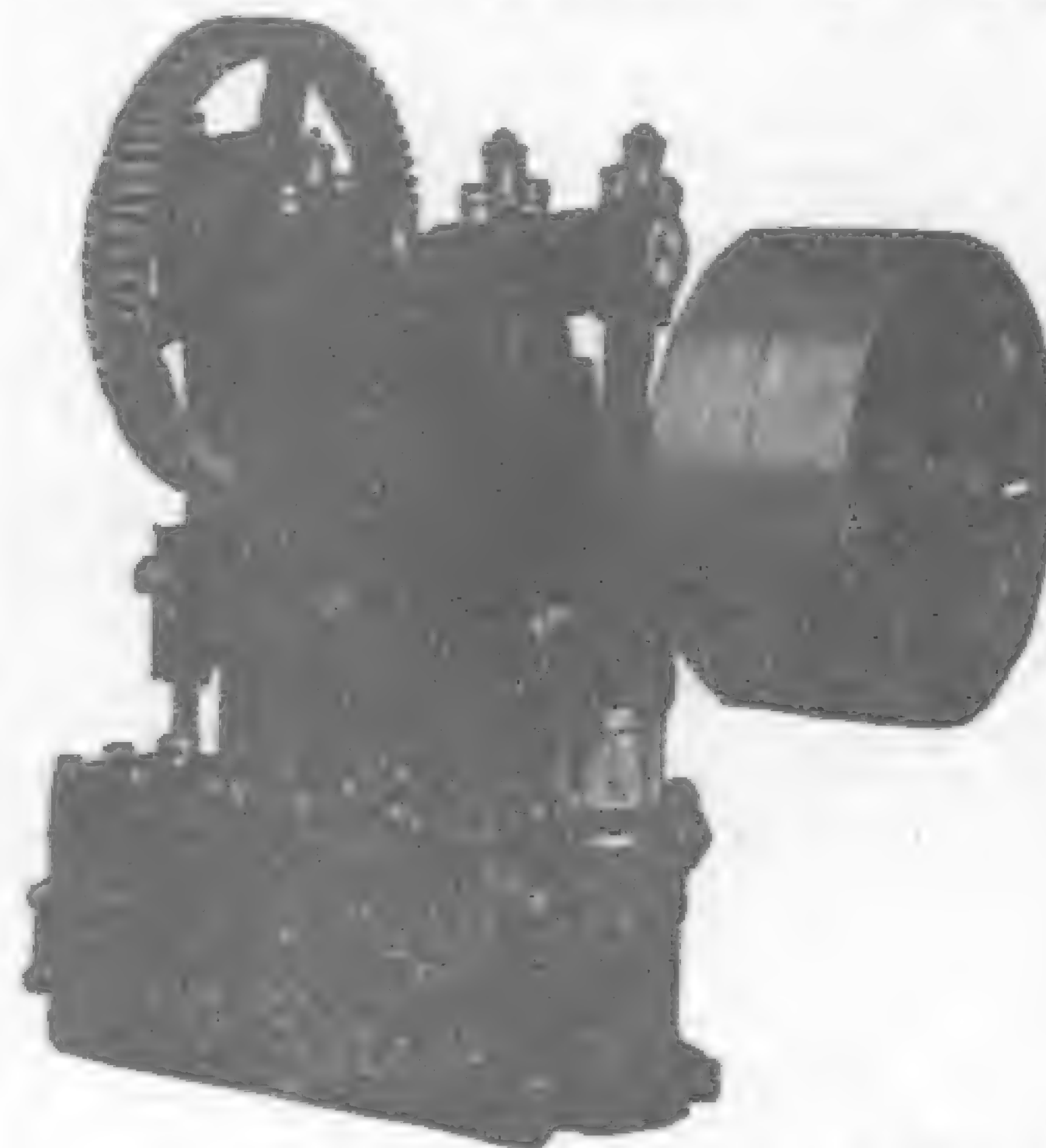
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REDUCE PUMPING COSTS 33-1/3%

When driven by electric motor, Deming power pumps are almost automatic. Scientific tests have proven that they cost about 33 1/3% less to operate than steam pumps. The old style direct-acting steam pump is being supplanted in factories, and power plants by the modern Deming power Pumps. For boiler feeding, brine circulation, general water supply, etc., they have no equal. They may be operated by any power.



Special attention is given to export packing. We have been doing an export business for years so that we know how to handle such orders to the best advantage. Write for 192 page power pump Catalogue and send a statement of conditions under which the pump will have to work.

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SALEM, OHIO, U. S. A.

Manufacturers of Hand and Power Pumps for All Uses

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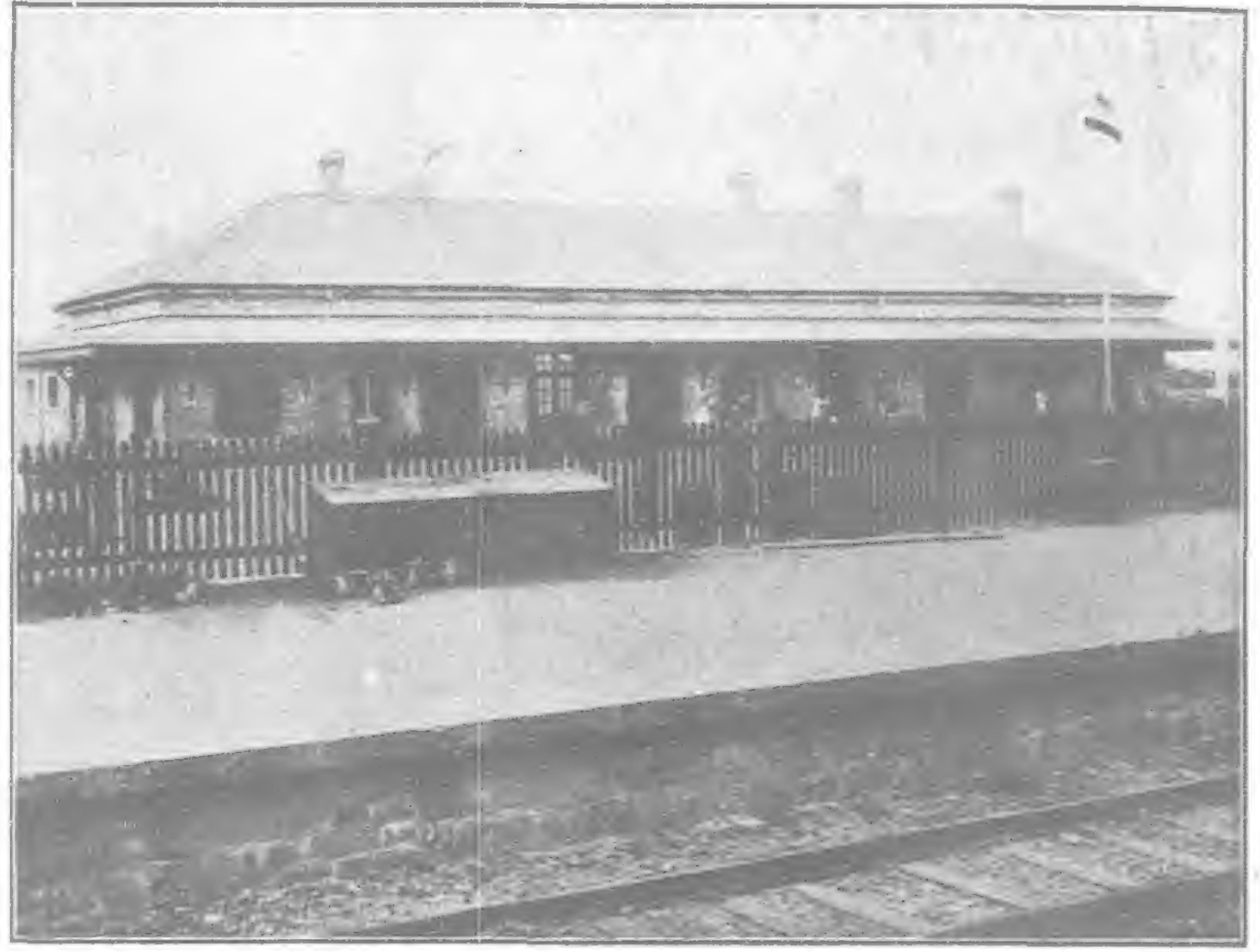
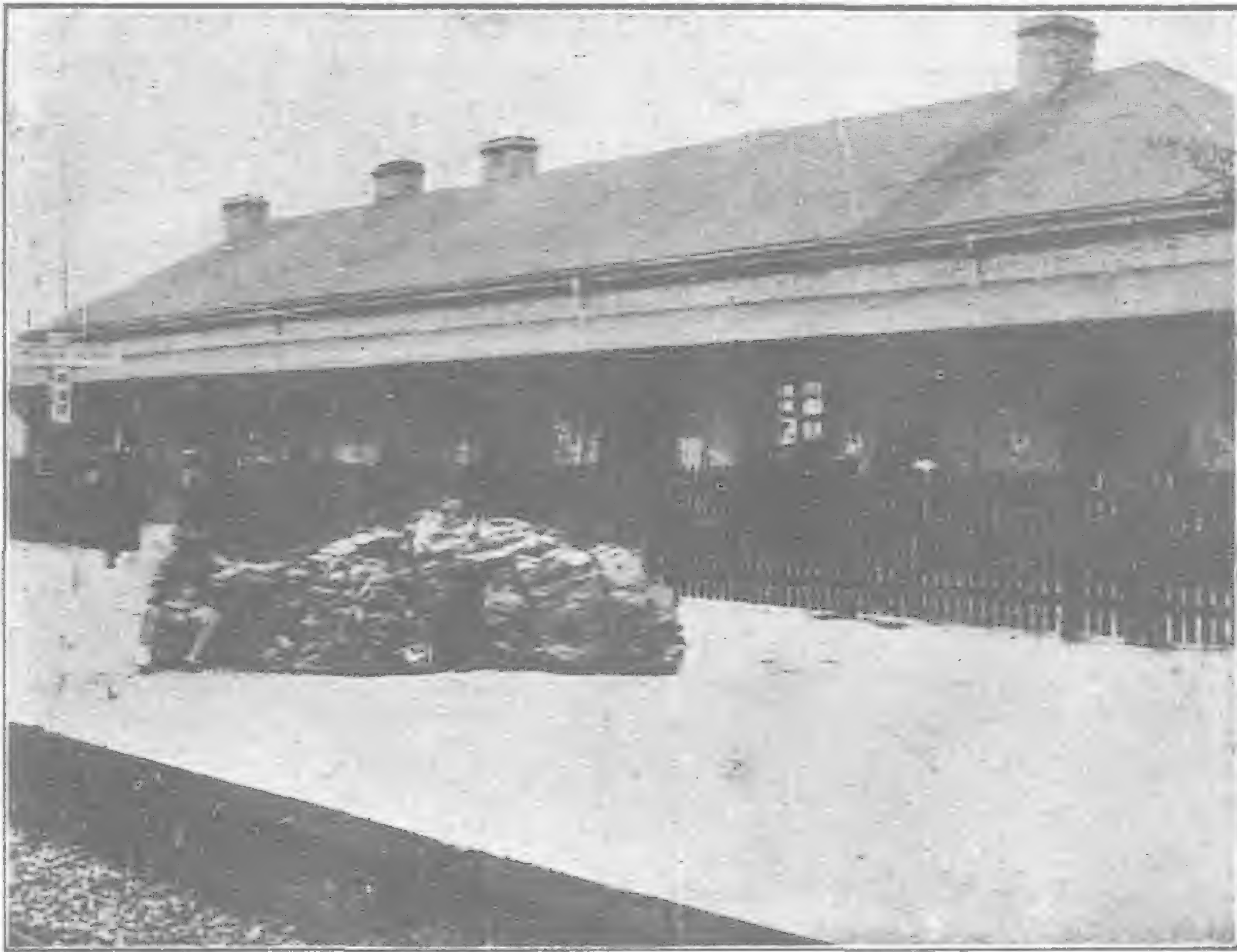
Freight & Customs Brokers.

Storage and Insurance effected.

CHINESE GOVERNMENT RAILWAYS

TIENTSIN-PUKOW LINE

Express Passenger Train Service



STATION AT LIU HUAI KUAN

TIENTSIN-PUKOW RAILWAY. BRITISH OR SOUTHERN SECTION

STATION AT PENG-PU

Notice is hereby given that through express service of first, second and third classes with dining and sleeping cars from Tientsin to Pukow has been inaugurated on December 4th, 1912, and until further notice. These trains will leave Pukow on Mondays, and Tientsin, on Saturdays, stopping only at the principal stations en route.

UP TRAIN TIME TABLE DOWN TRAIN

Stations	Mon- days only	Daily Through Mail Service	Stations	Satur- days only	Daily Through Mail Service
Pukow dep.	1.45	9.50	Tientsin East dep.	11.20	9.35
Hsuchowfu „	9.47	7.56	Tientsin Cen. arr.	11.30	9.45
Tsinanfu „	6.40	7.00	Tientsin Cen. dep.	11.48	10.02
Techow „	9.21	9.50	Techow „	5.19	4.44
Tientsin Cen. arr.	2.33	3.40	Tsinanfu „	8.12	8.32
Tientsin Cen. dep.	2.43	4.10	Hsuchowfu „	5.18	7.16
Tientsin East arr.	2.53	4.20	Pukow arr.	1.13	4.30

Departure		Arrival	
Monday Pukow	1.45 A.M.	Tuesday Tientsin	2.53 A.M.
Saturday Tientsin	11.20 P.M.	Sunday Pukow	1.13 P.M.

EXPRESS FARE TABLES

1st class		
PUKOW-HSUCHOWFU	HSUCHOWFU-TSINANFU	TSINANFU-TIENTSIN
\$13.90	\$13.60	\$14.60
2nd class		
PUKOW-HSUCHOWFU	HSUCHOWFU-TSINANFU	TSINANFU-TIENTSIN
\$9.30	\$9.05	\$9.70
3rd class		
PUKOW-HSUCHOWFU	HSUCHOWFU-TSINANFU	TSINANFU-TIENTSIN
\$4.65	\$4.50	\$4.90

LUGGAGE ALLOWANCE

1st class, 150 catties; 2nd class, 100 catties; 3rd class, 50 catties.

Excess luggage is charged at one (1) cent per picul per mile on the express trains and half a cent on ordinary trains.

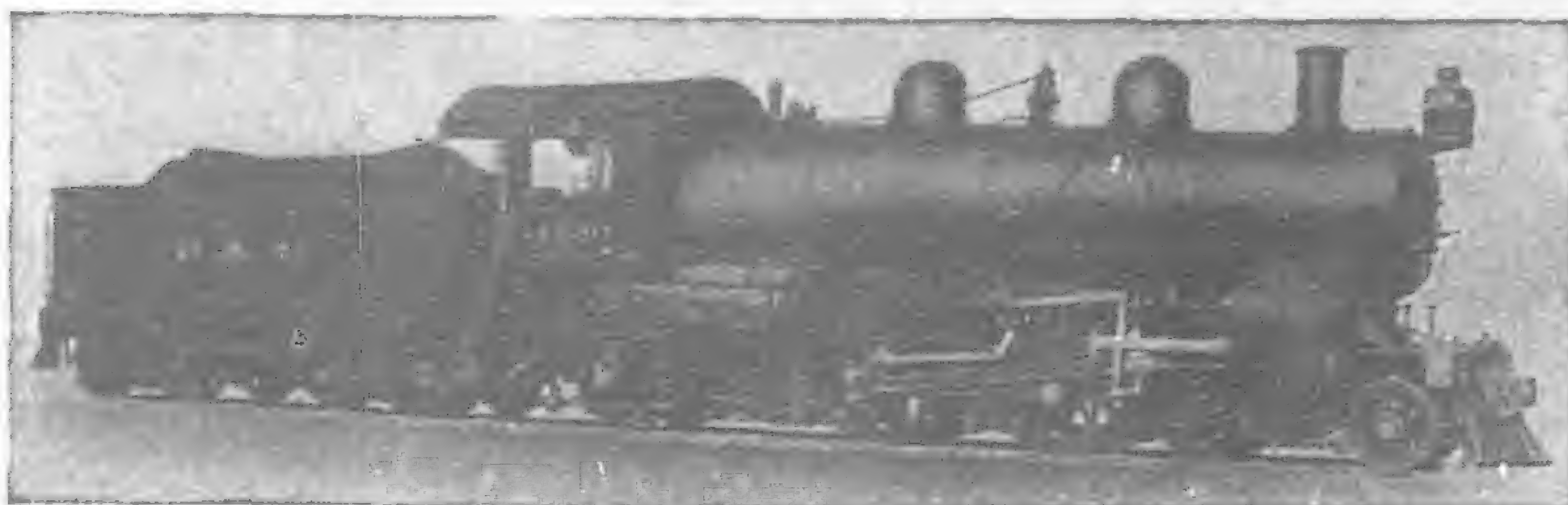
Only first class passengers are entitled to book sleeping berths, at \$5.00 per berth.

The Railway ferry steam-launch, lying at the jetty above the Japanese Hulk, will carry passengers across the river forty minutes before the trains leave. Passengers may book their tickets at the office on the ferry jetty.

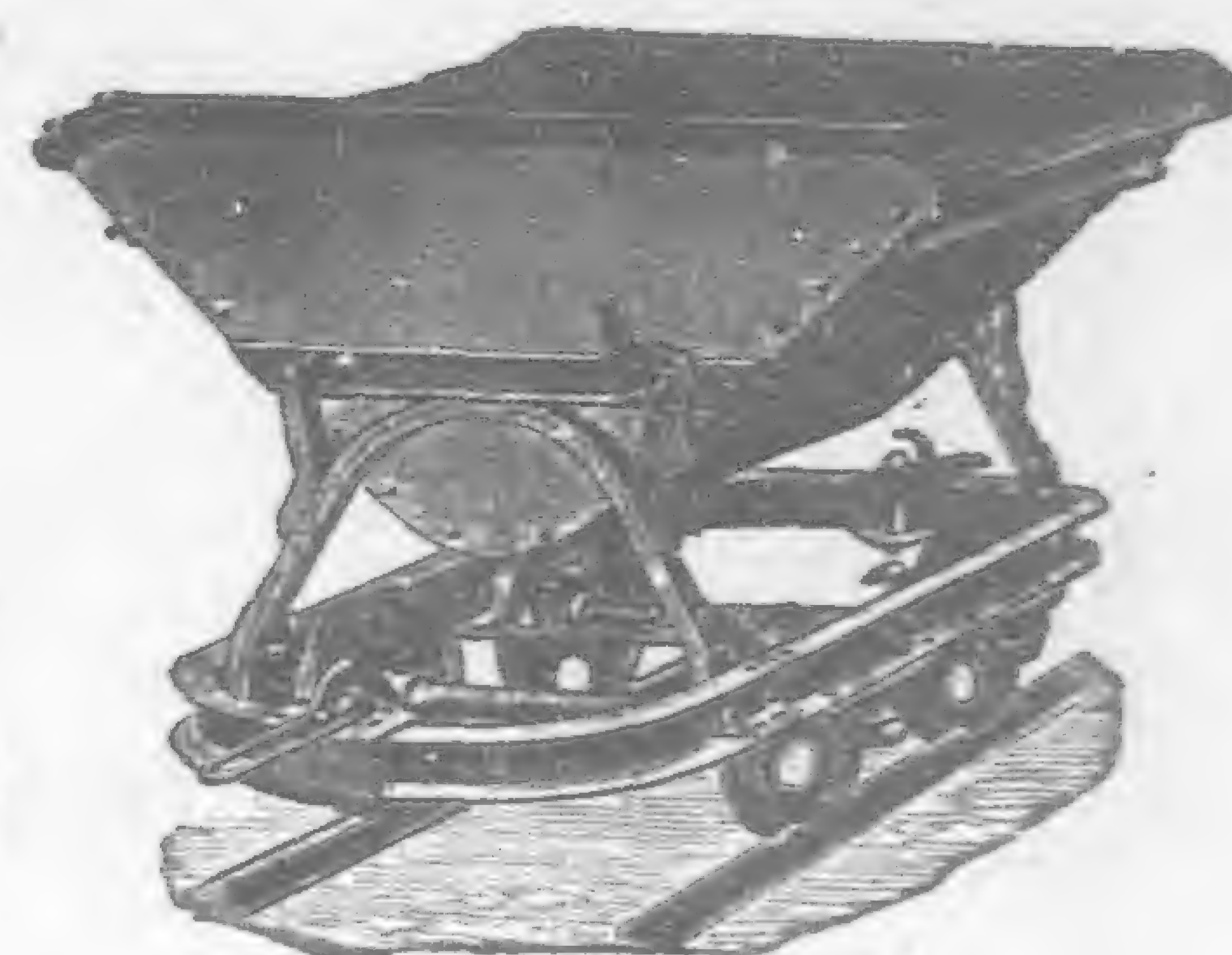
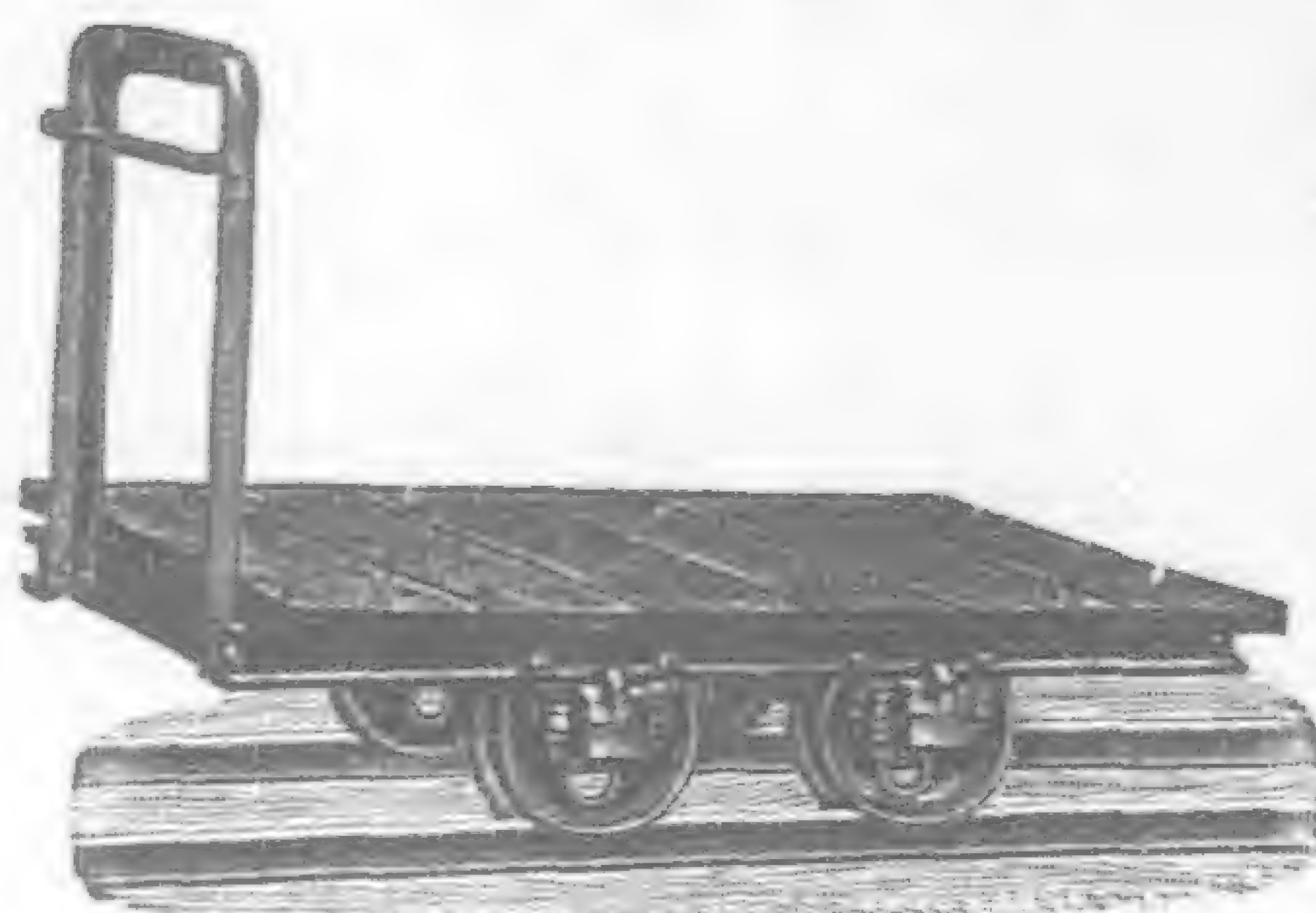
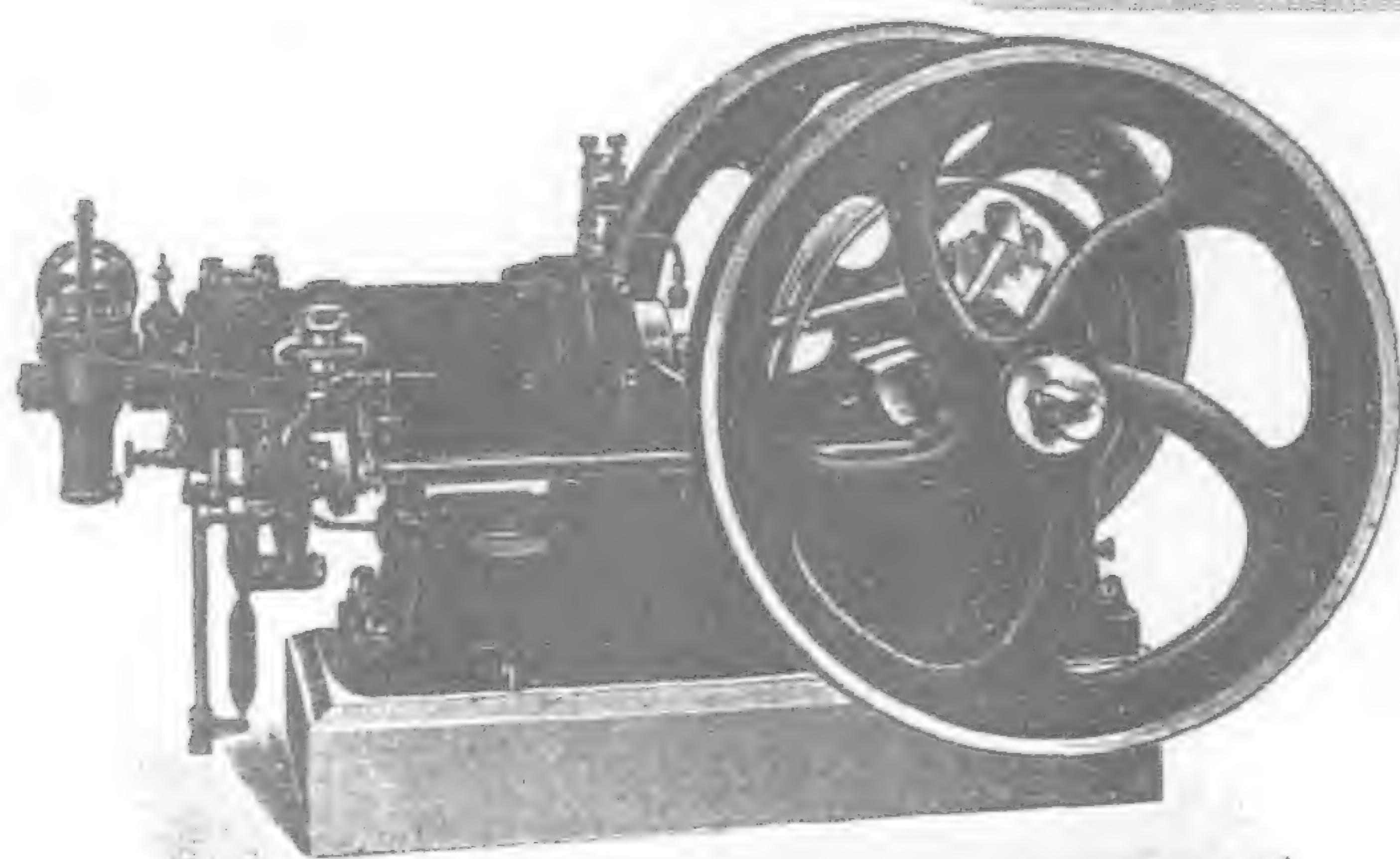
The ordinary trains running between Pukow-Hsuchowfu, Hsuchowfu-Tsinanfu, and Tsinanfu-Tientsin will continue as before. For time refer to the Time Table.

For further particulars, etc., apply to the Traffic Department at Tientsin or Head Office, Nanking.

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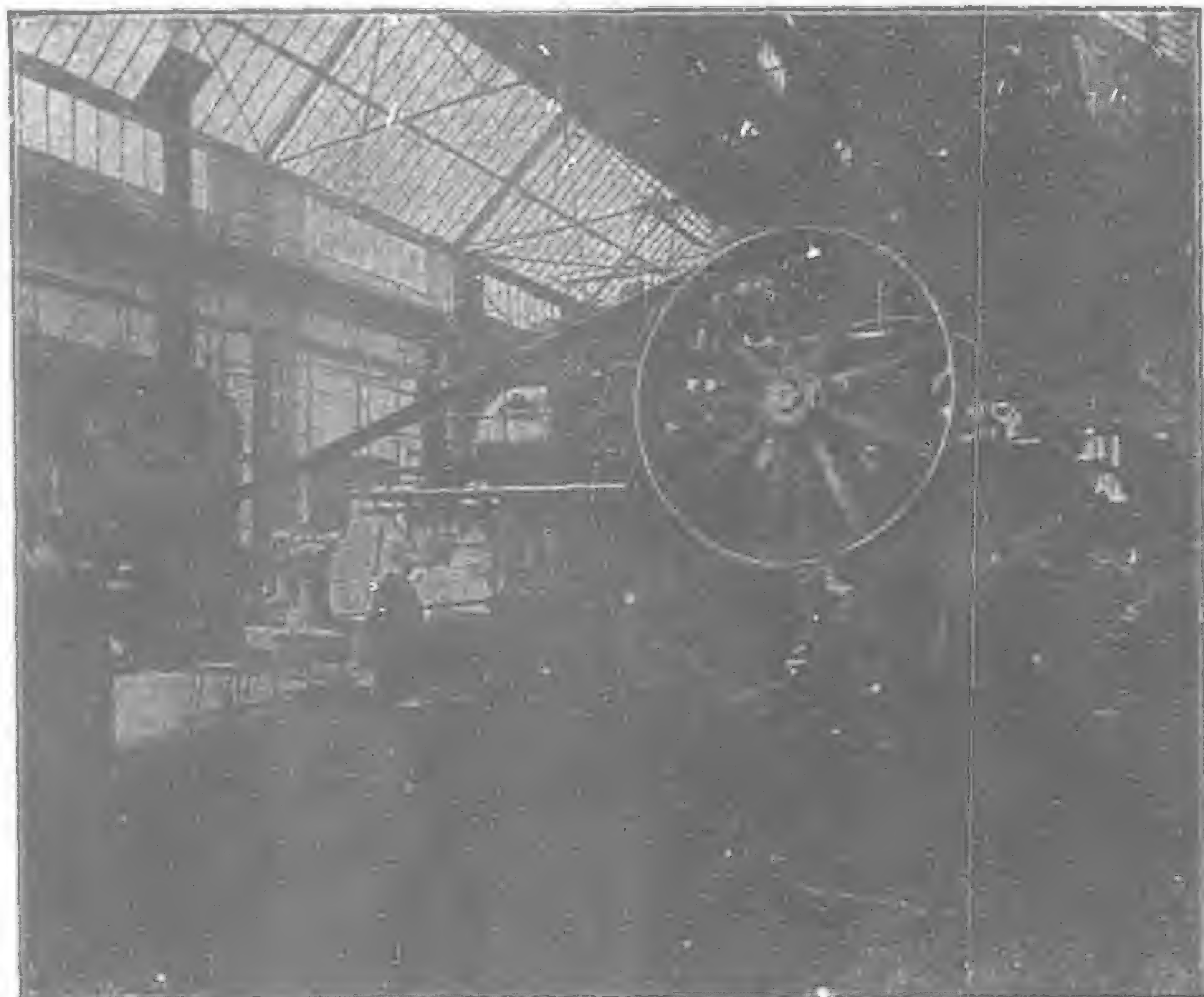
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Arnhold, Karberg & Co. MAISHAN
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Paterson, Simons & Co., Ltd., PATERSON
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Allahabad, 1911: GOLD MEDAL.
Brussels, Buenos Aires, 1910, Roubaix, Turin,
Dresden, 1911: EIGHT GRANDS PRIX.



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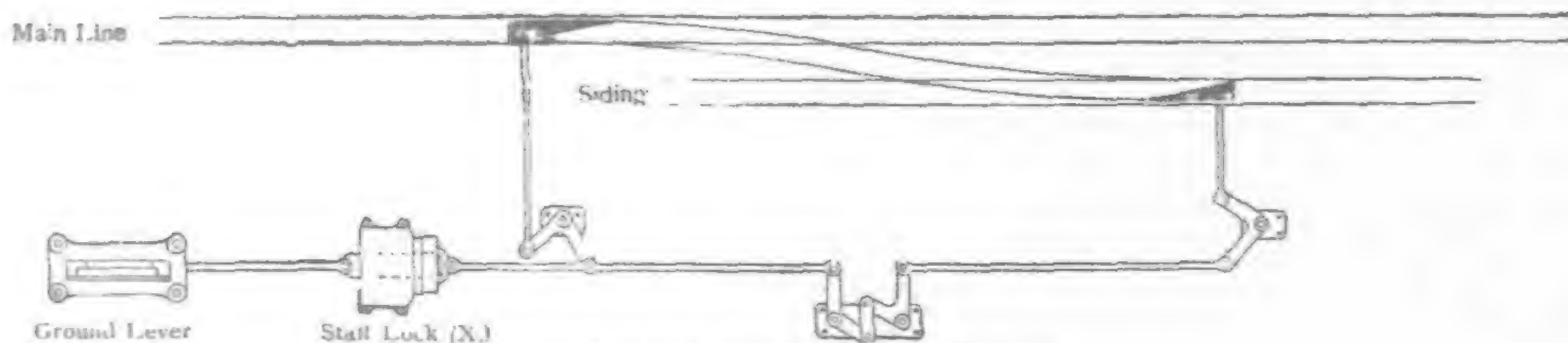
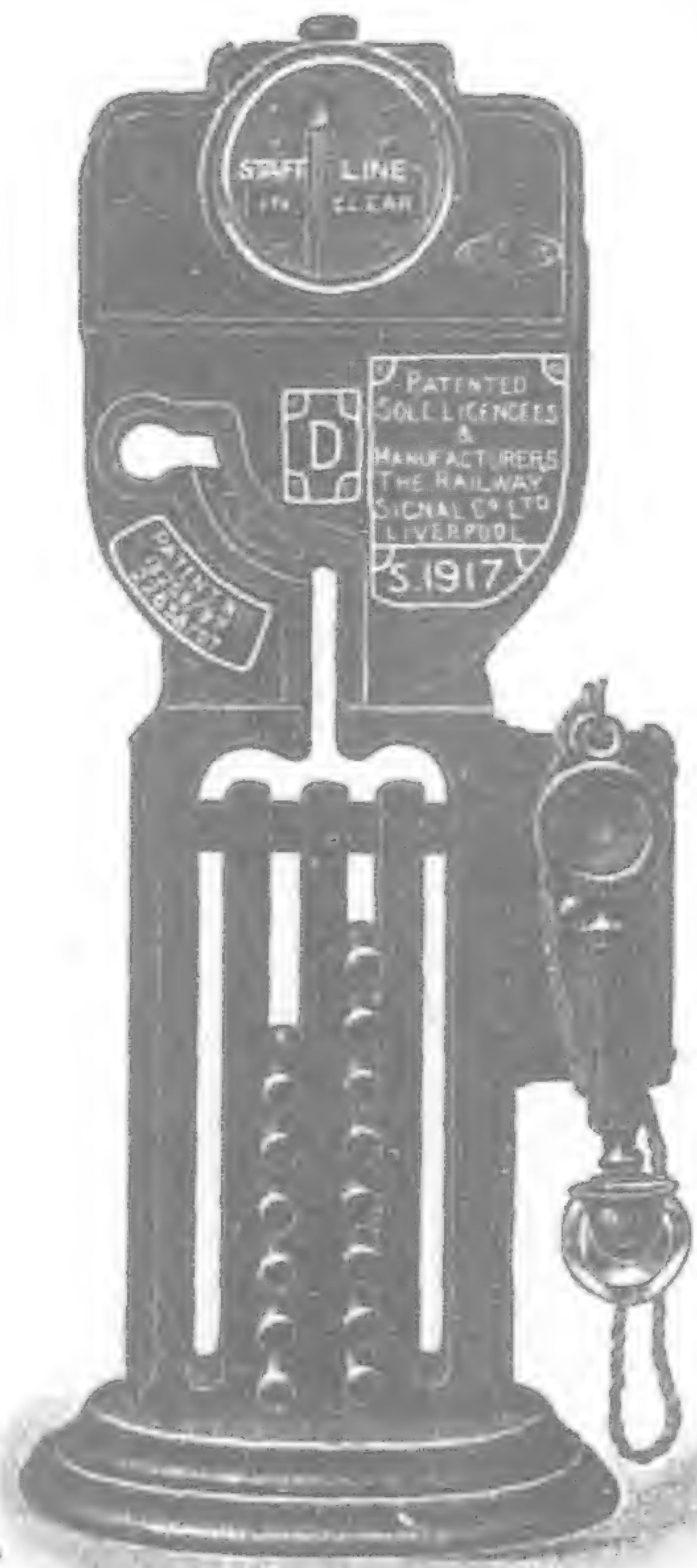
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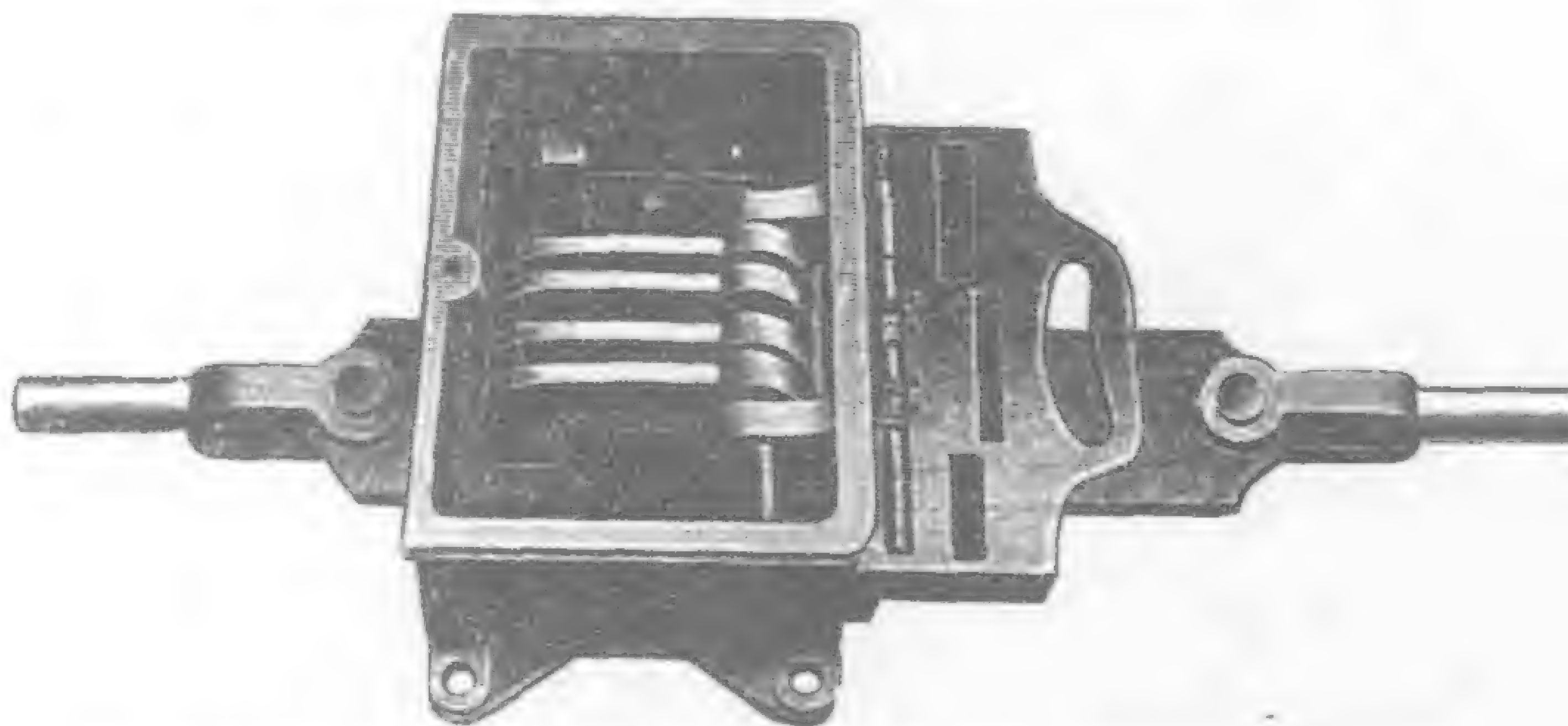
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When a train is required to enter or leave an outlying siding the staff is placed in the top slide of the lock, which is then pushed in. The lower slide, which is attached to the ground lever, is released, thus allowing the ground lever to be operated. When the points are set for the siding the train staff is securely locked in the box.



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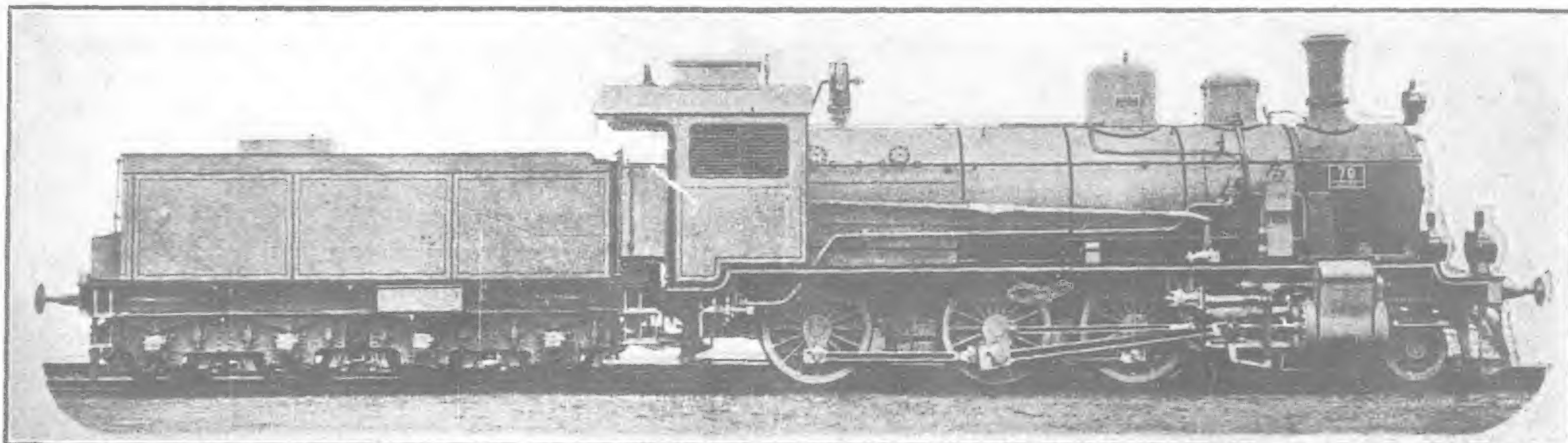
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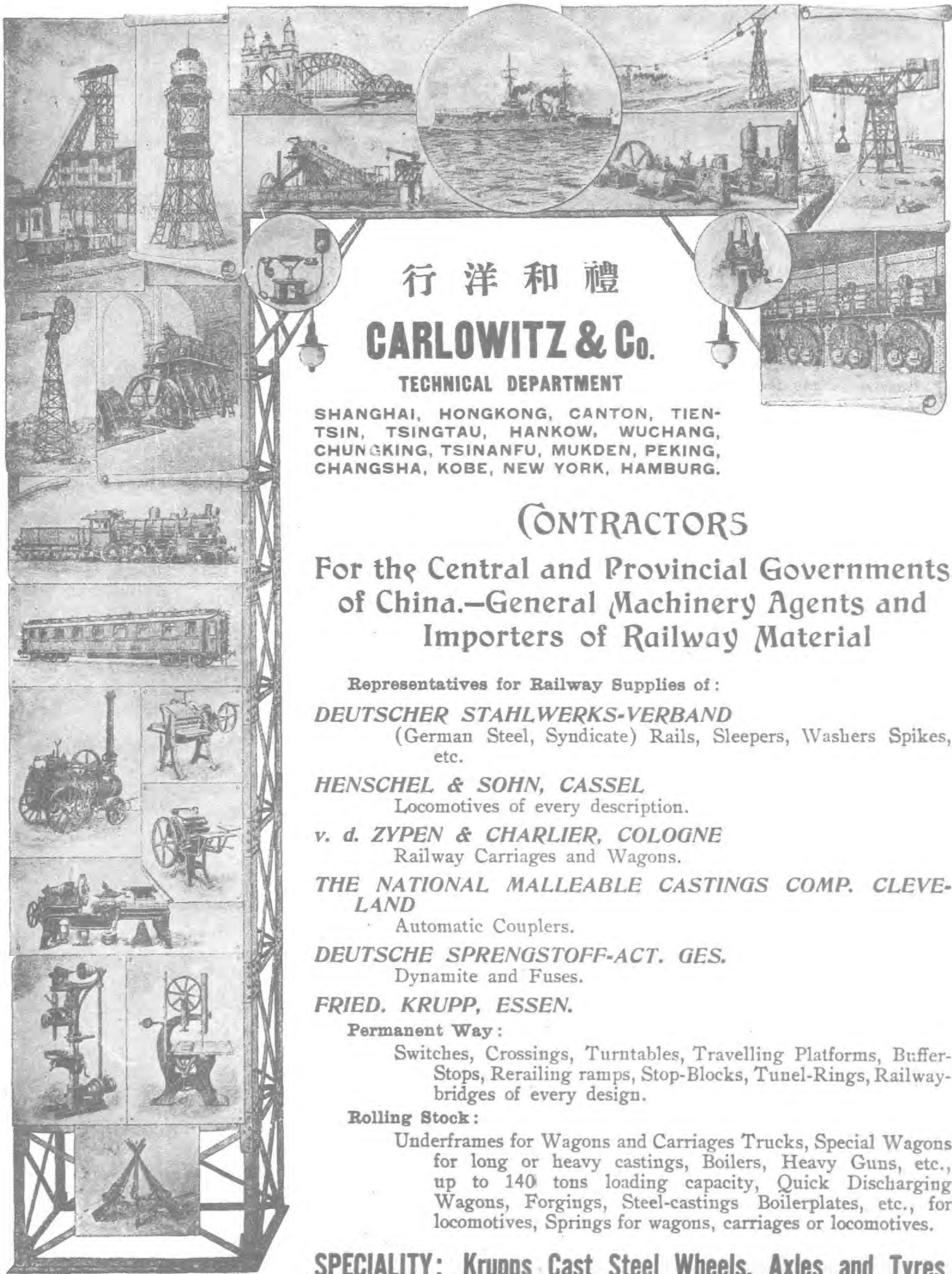
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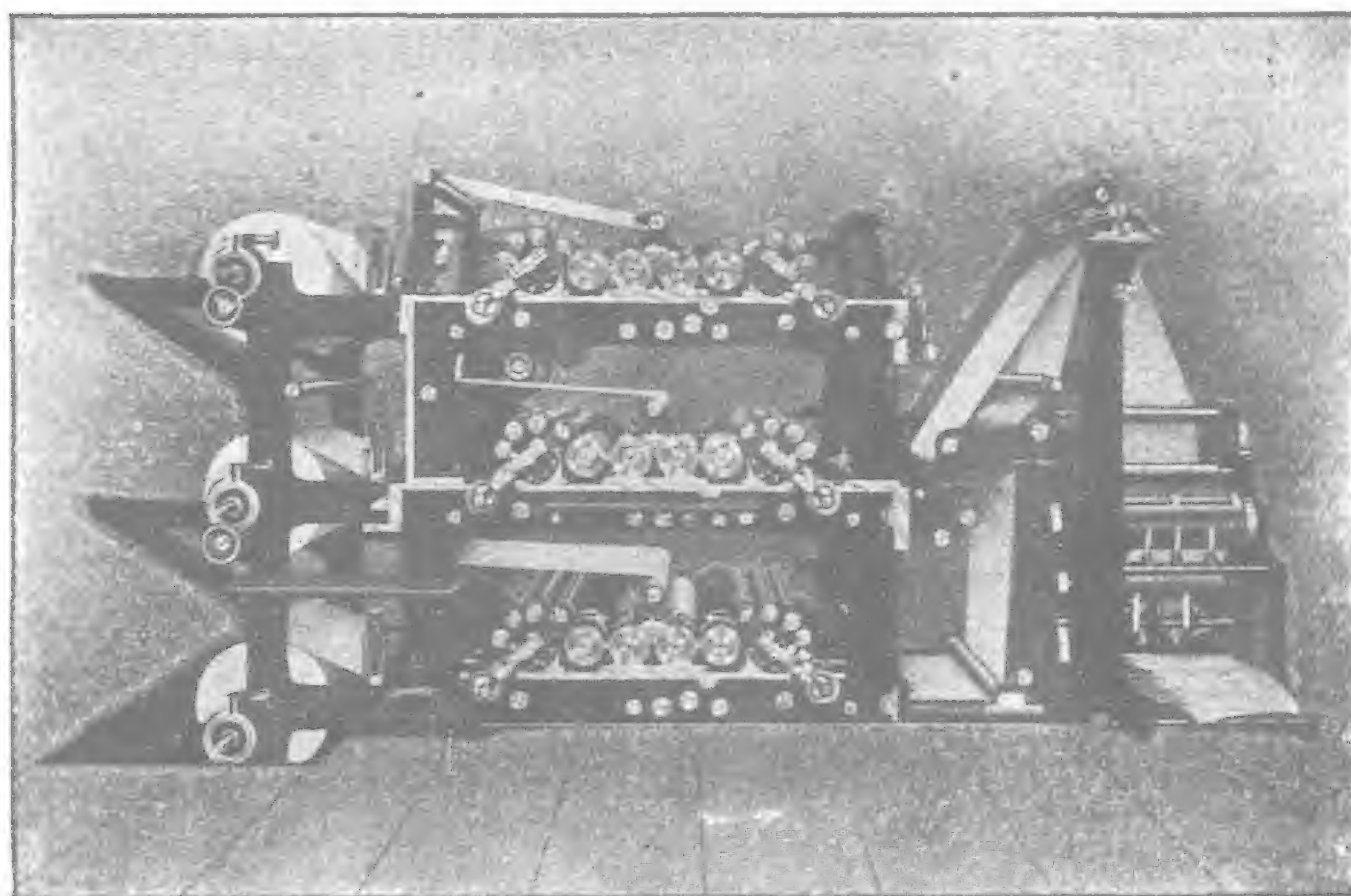
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Tokyo—Mitsui & Co., 1 Suruga, Cho.

Shanghai—Andersen, Meyer & Co., 4 Yuen Ming Yuen Road

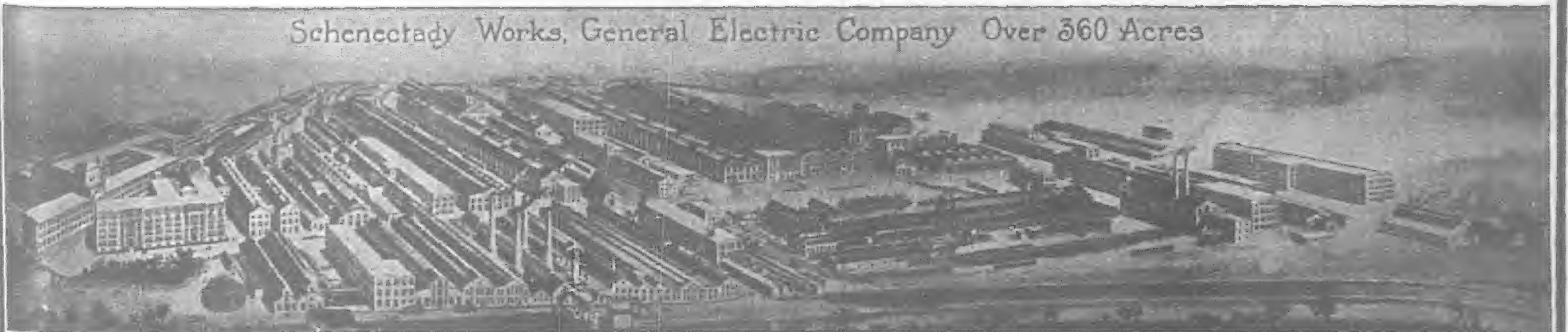
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Dairen S.M.R.	5	2130	Shanghai E. & A. Co.	3	100
Changsha H.E.L. Co.	4	1340	Shanghai S.N. Rly.	2	290
Chungking E.L. Co.	12	730	Shanghai Liddel Co.	1	75
Foochow E.L. Co.	2	480	Shanghai Nagai Wata Mill	2	1720
Hang-Yang I. & S.W.	4	2490	Shao-Shing E.L. Co.	1	175
Hankow L. & P. Co.	5	1675	Soochow E.L. Co.	1	720
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Hankow Liddel Co.	1	75	Swatow E.L. Co.	5	980
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Shanghai C.I.E.L. Co.	2	750	Pootung B.A.T.	1	40
Shanghai C.S. Co.	2	310	Taisho. E.L. Co. H'kow.	2	90
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Total Eng's=103.

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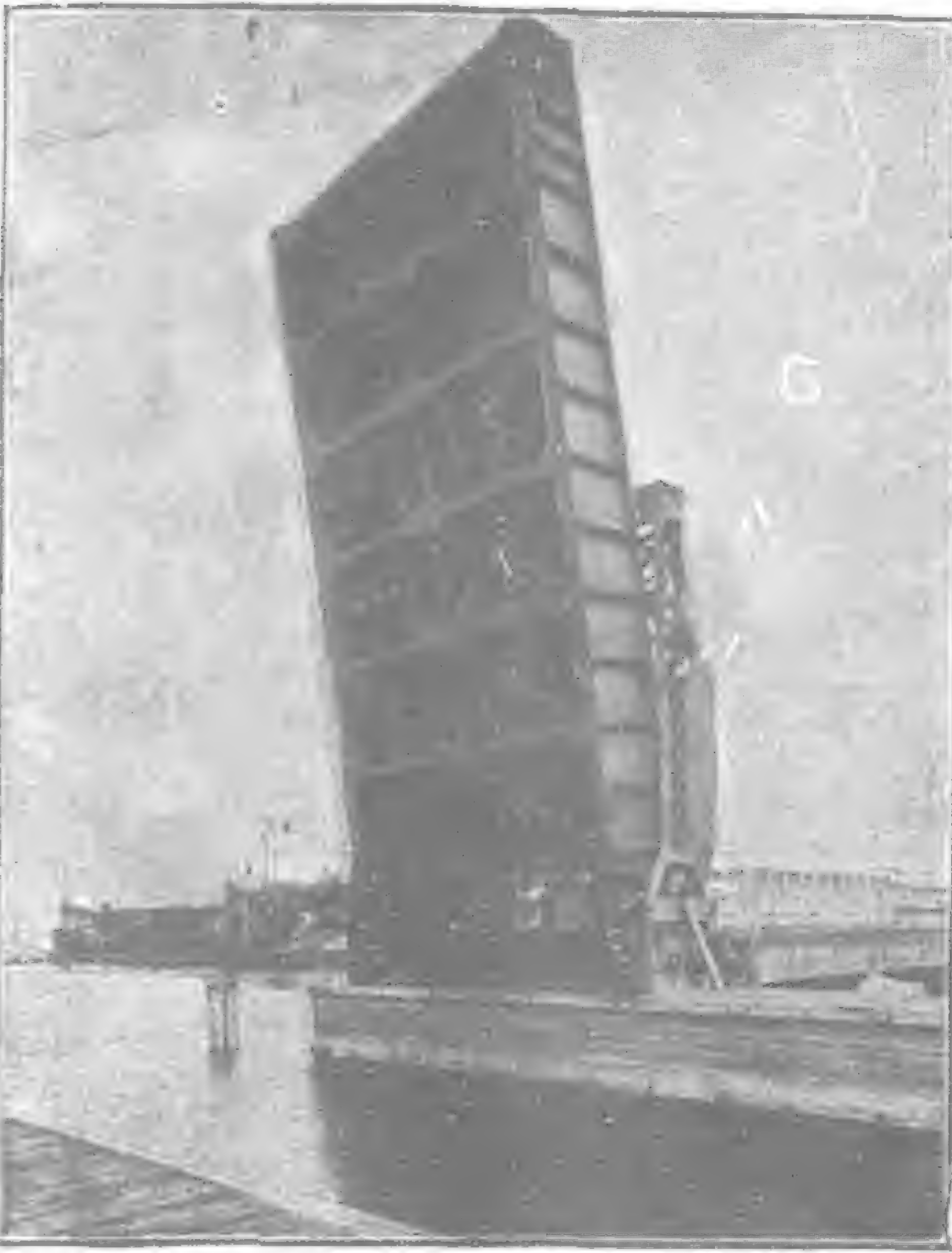
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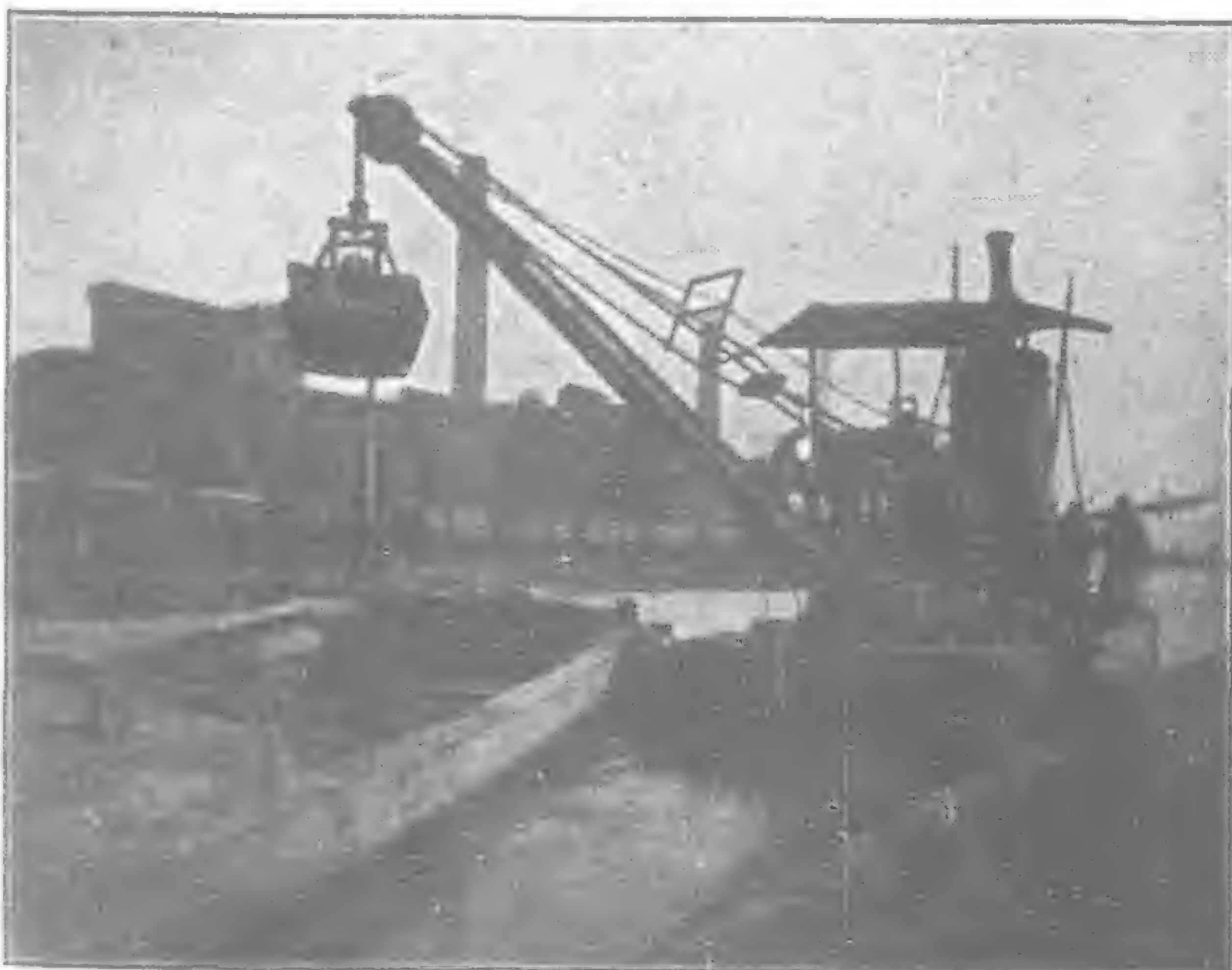
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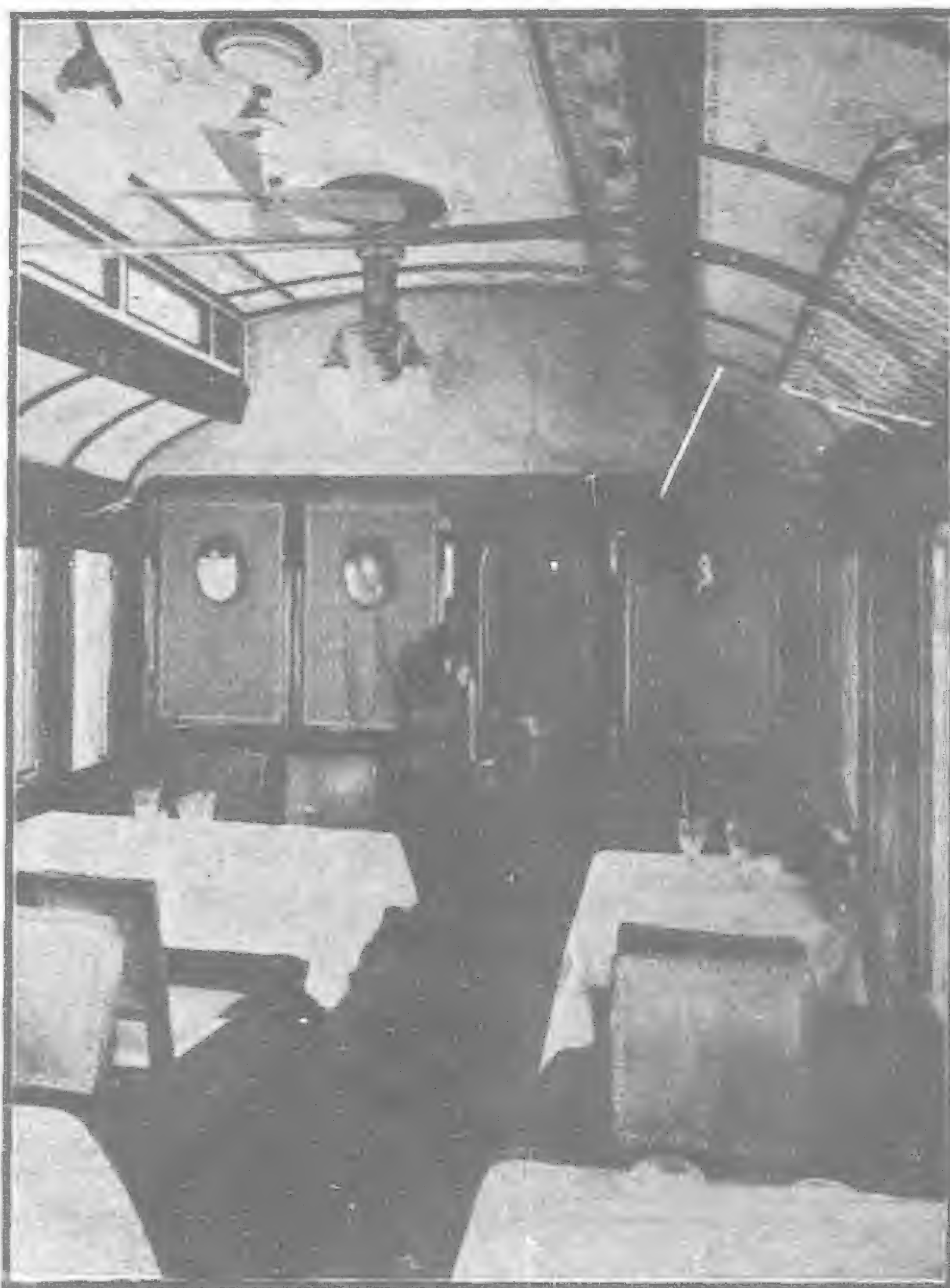
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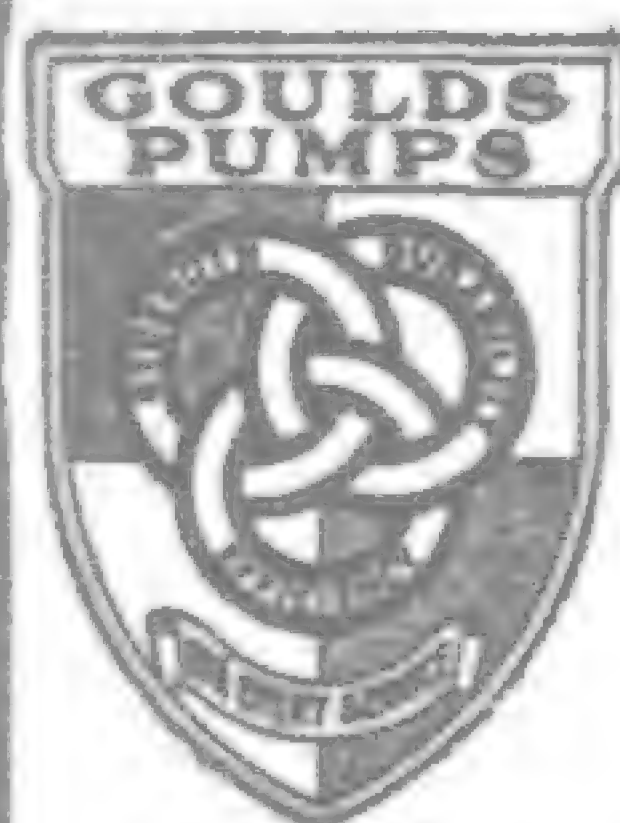
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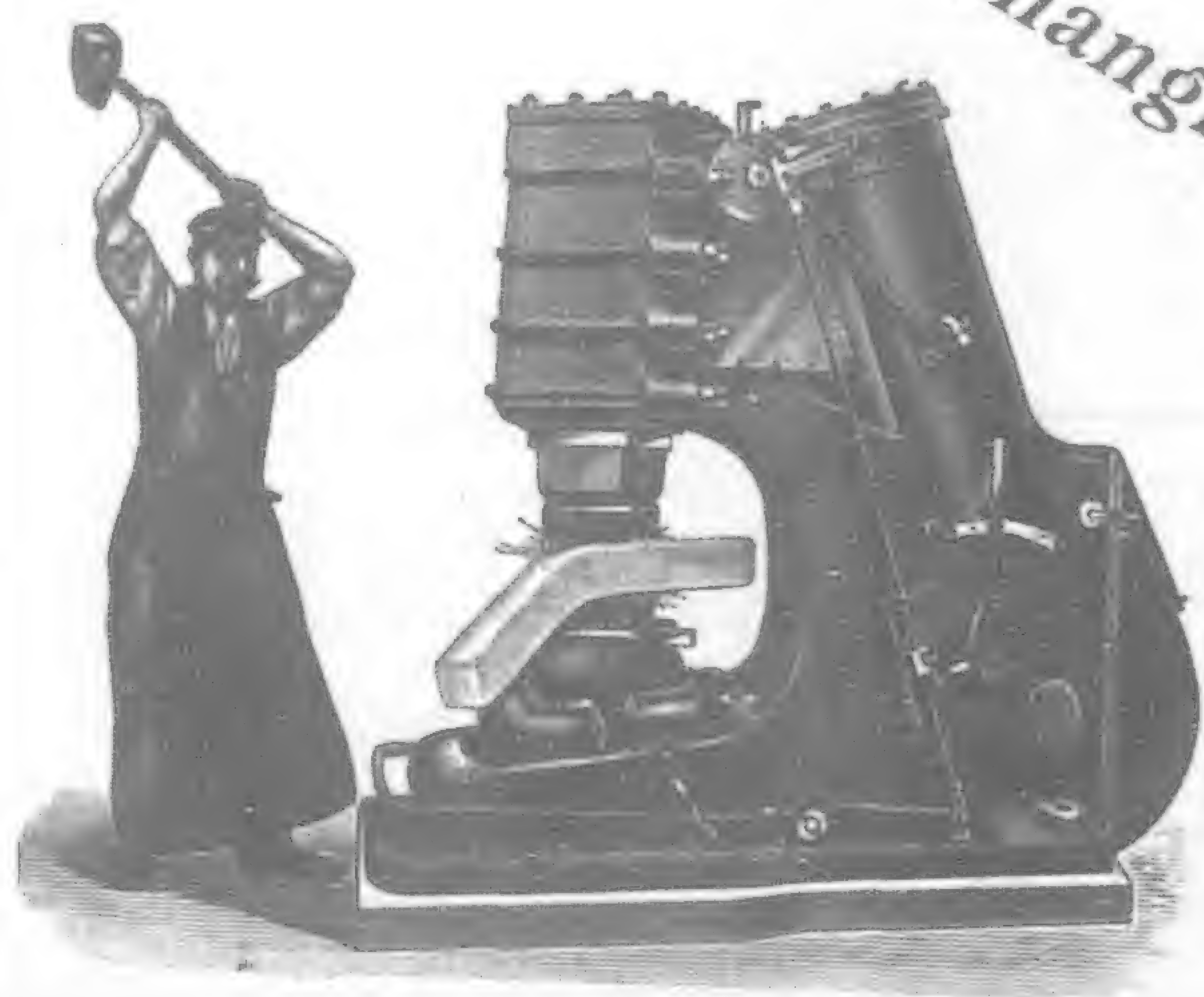
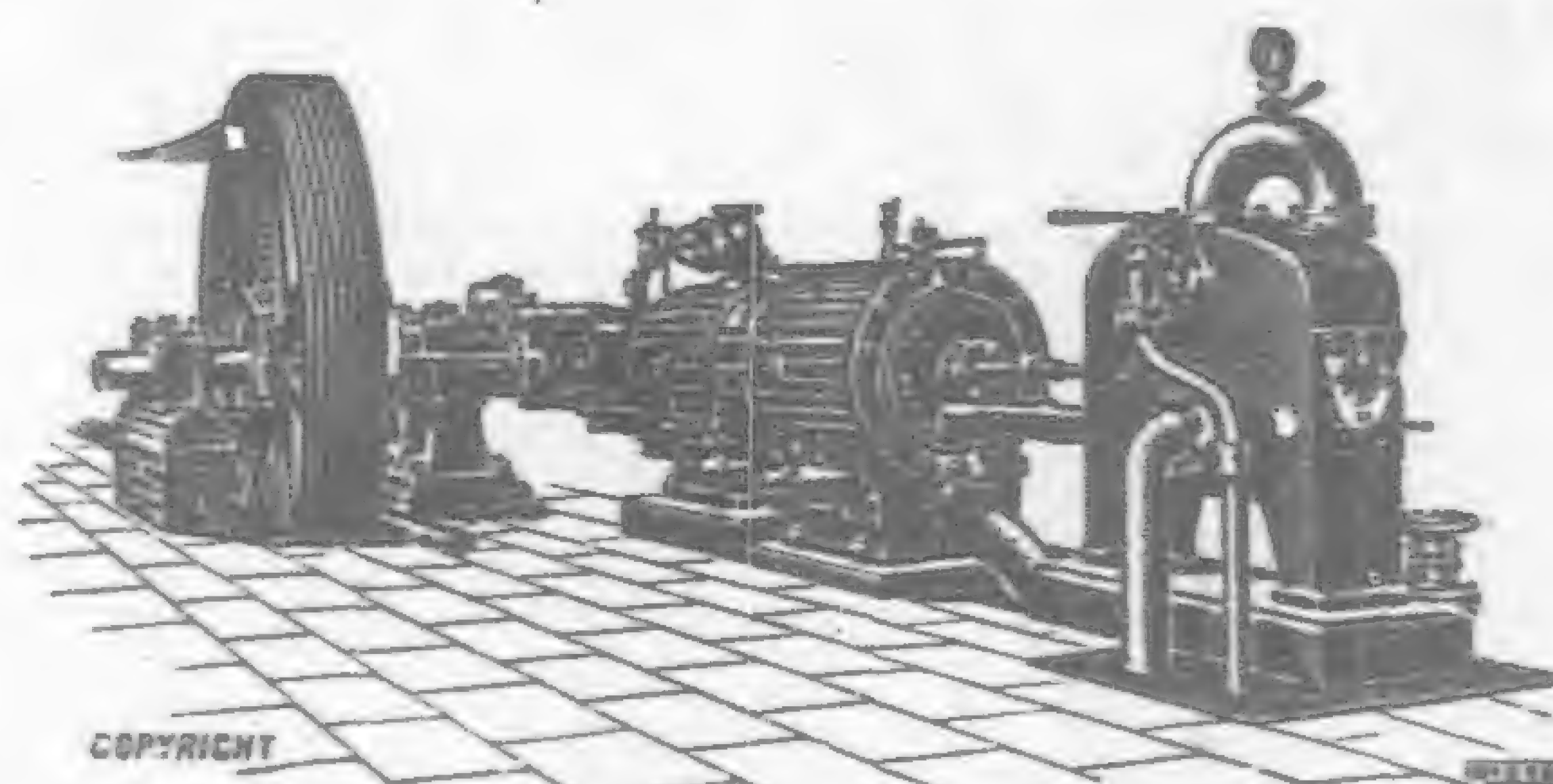
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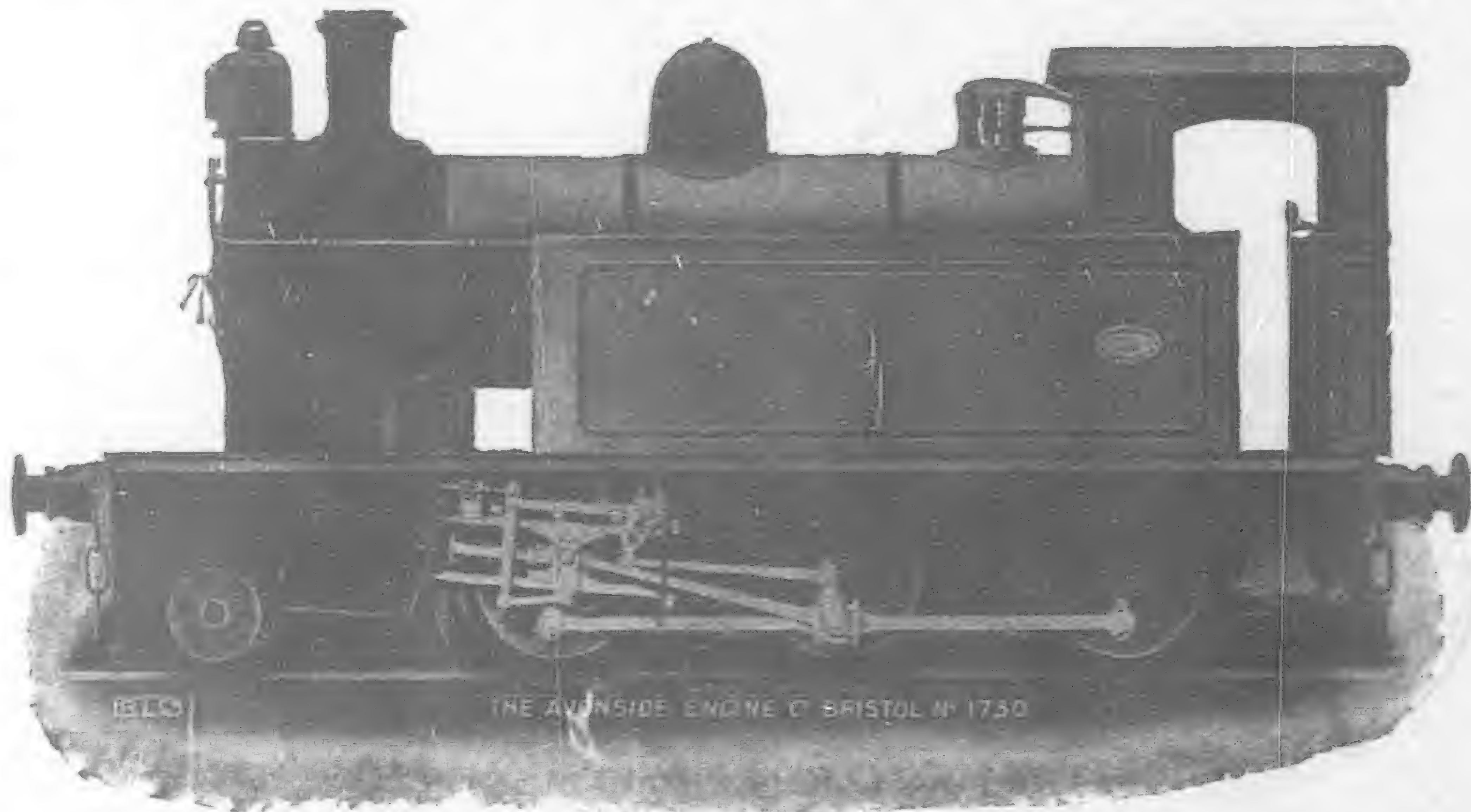
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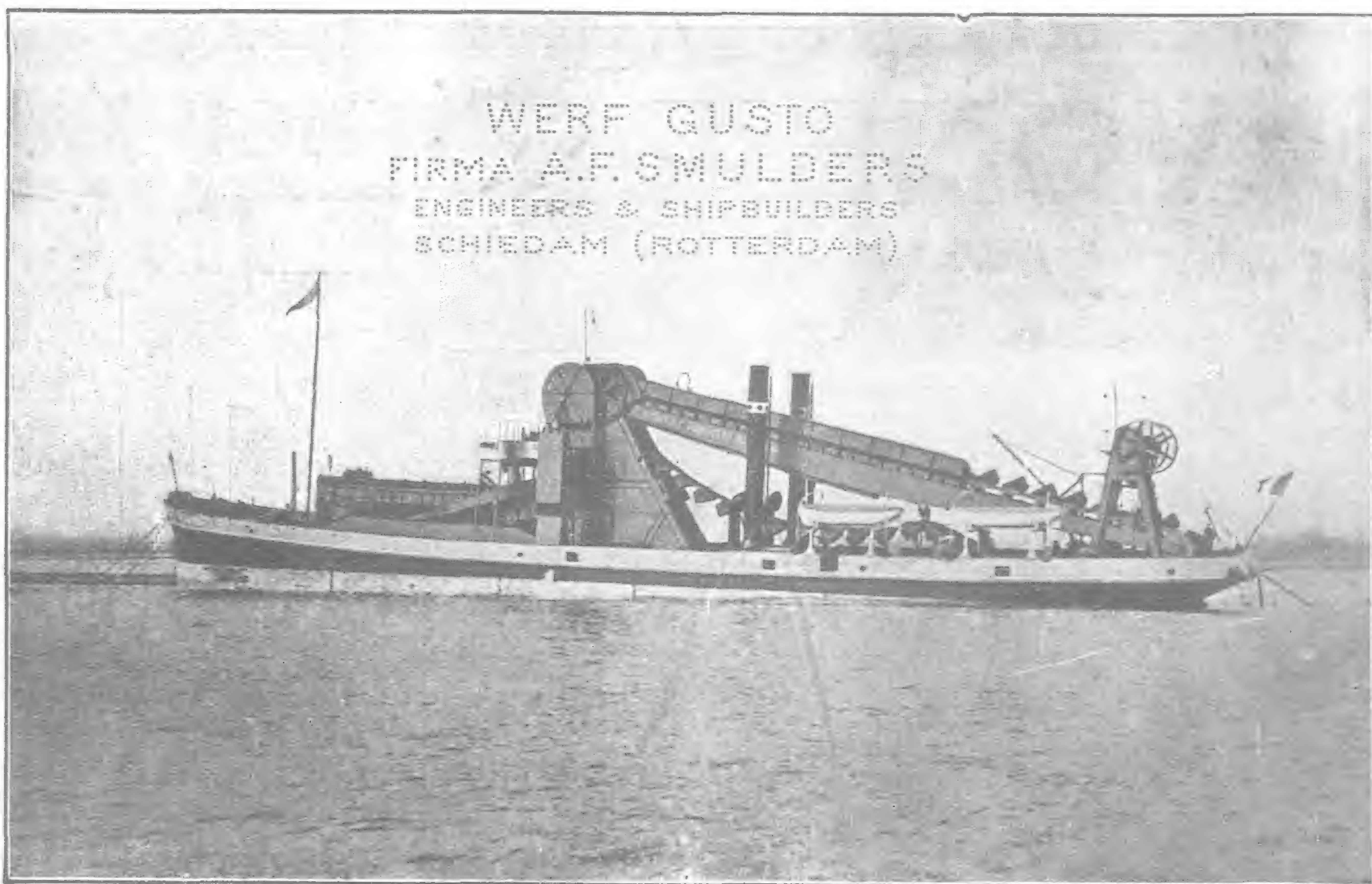
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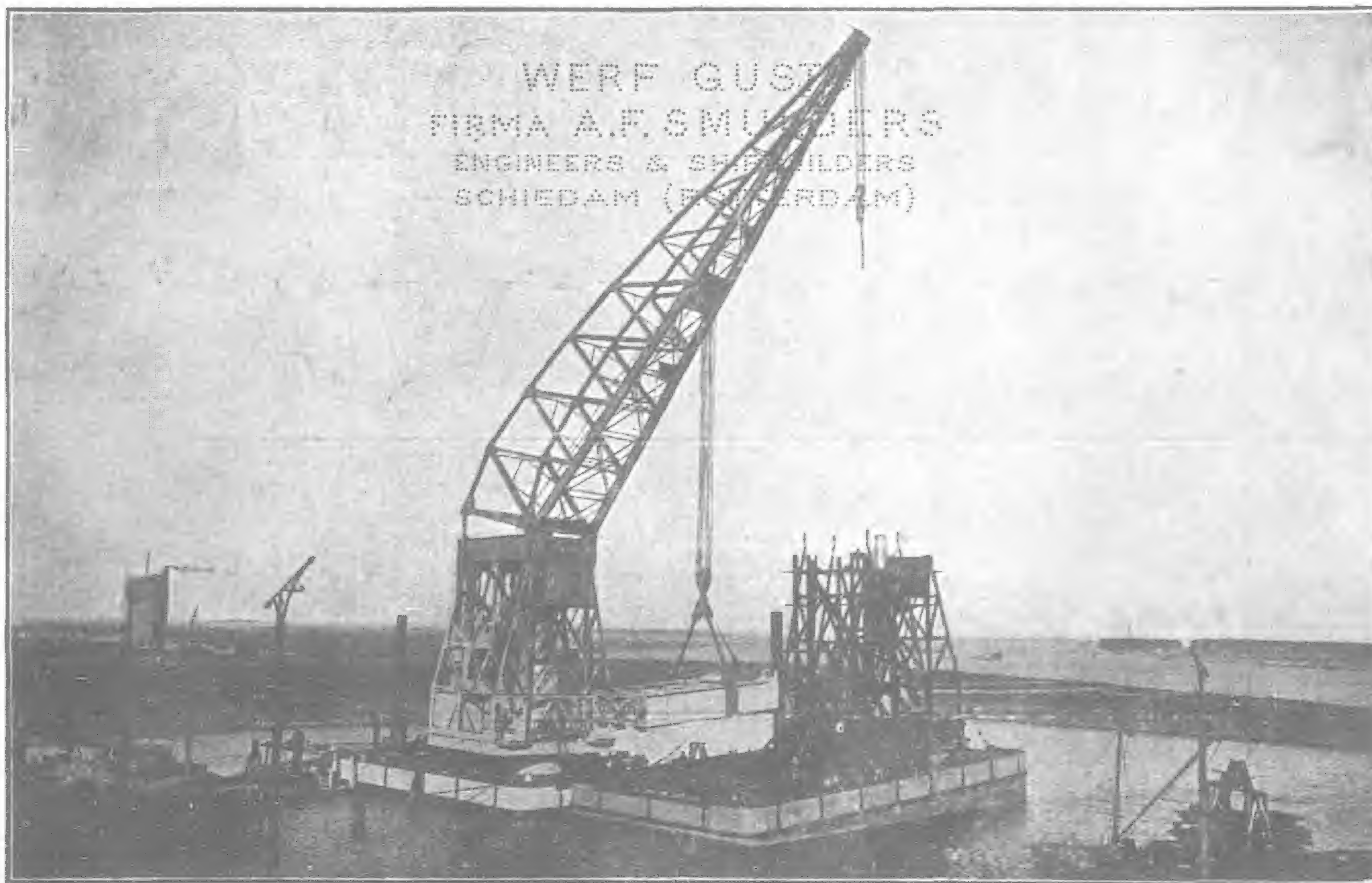
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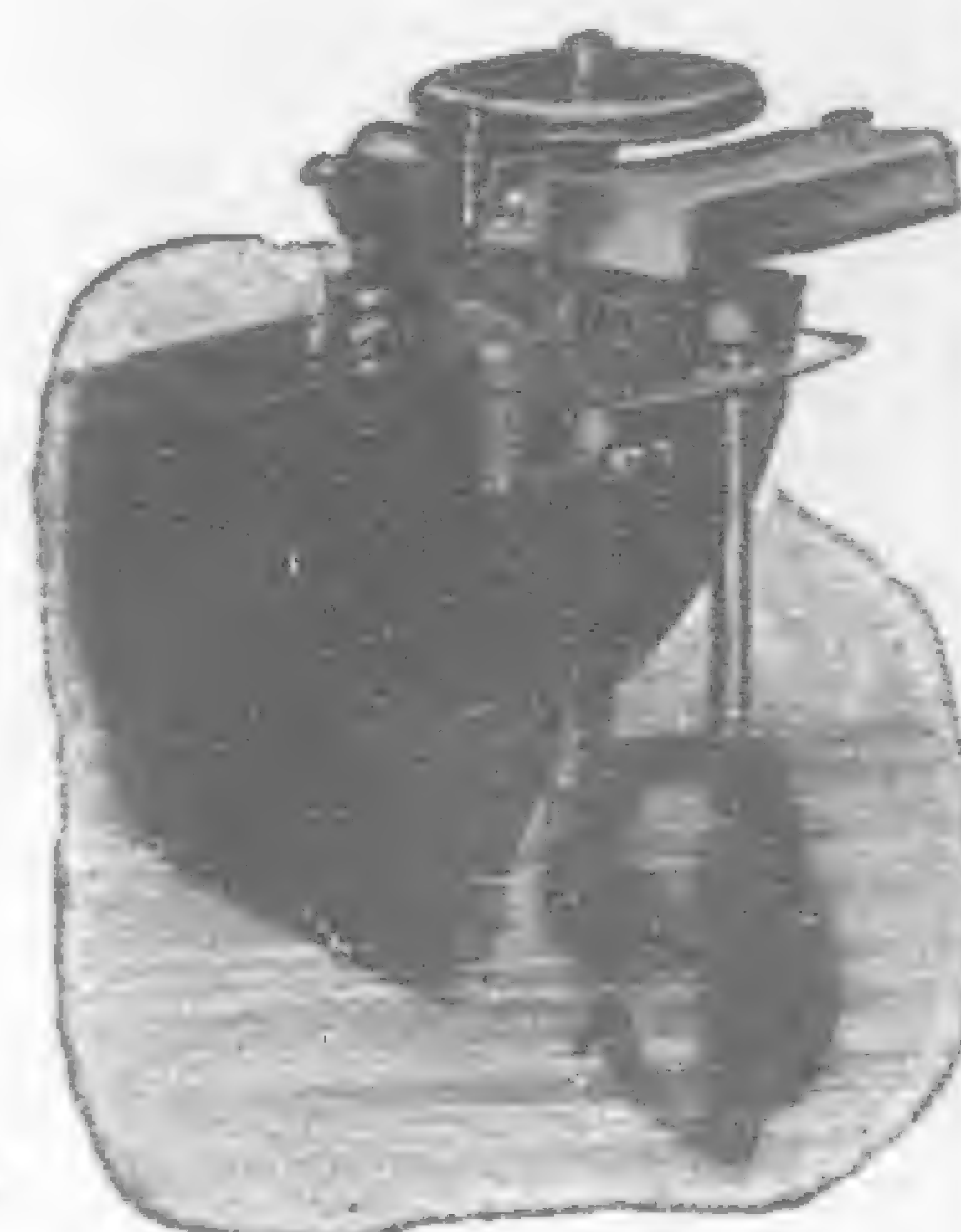
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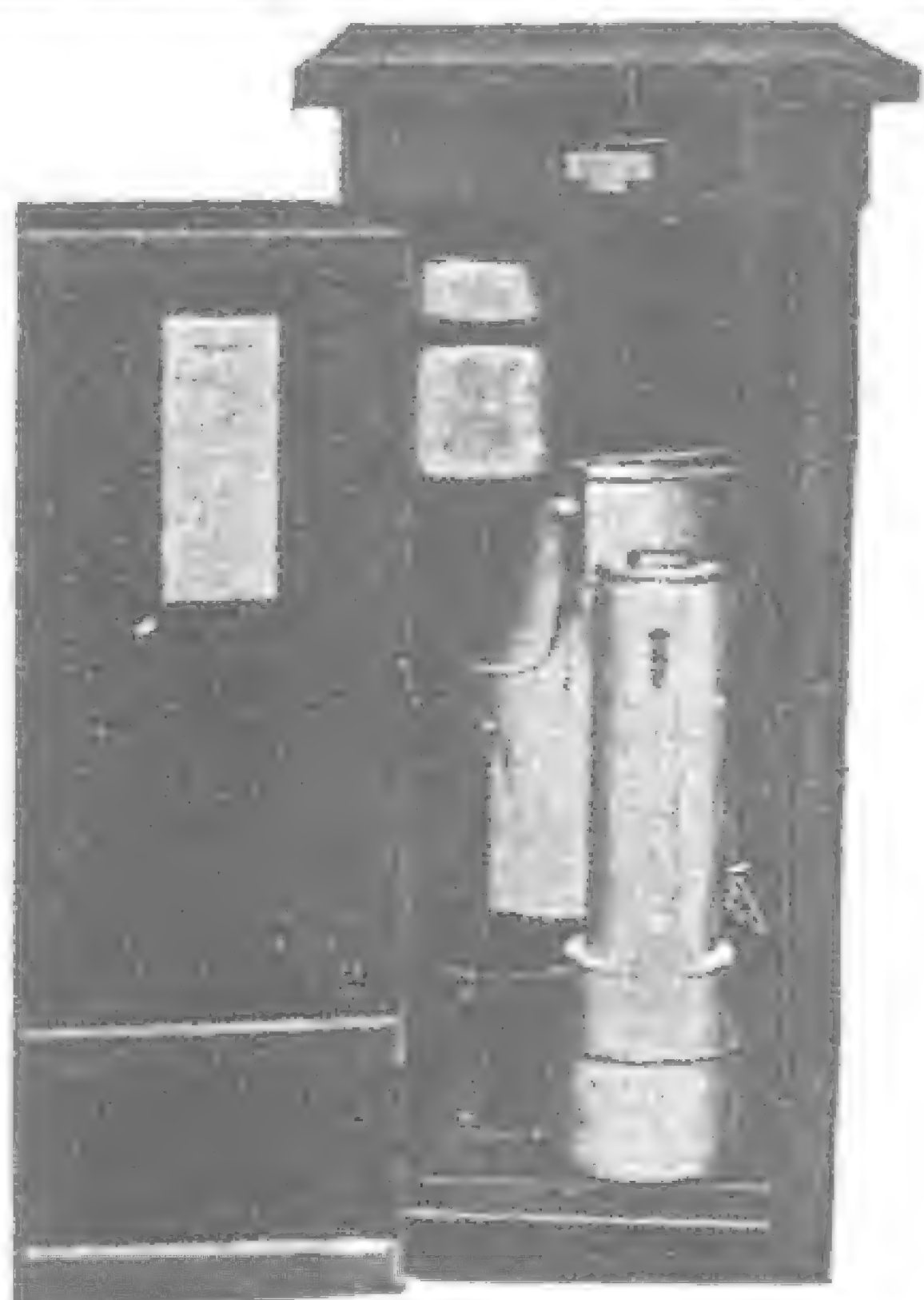
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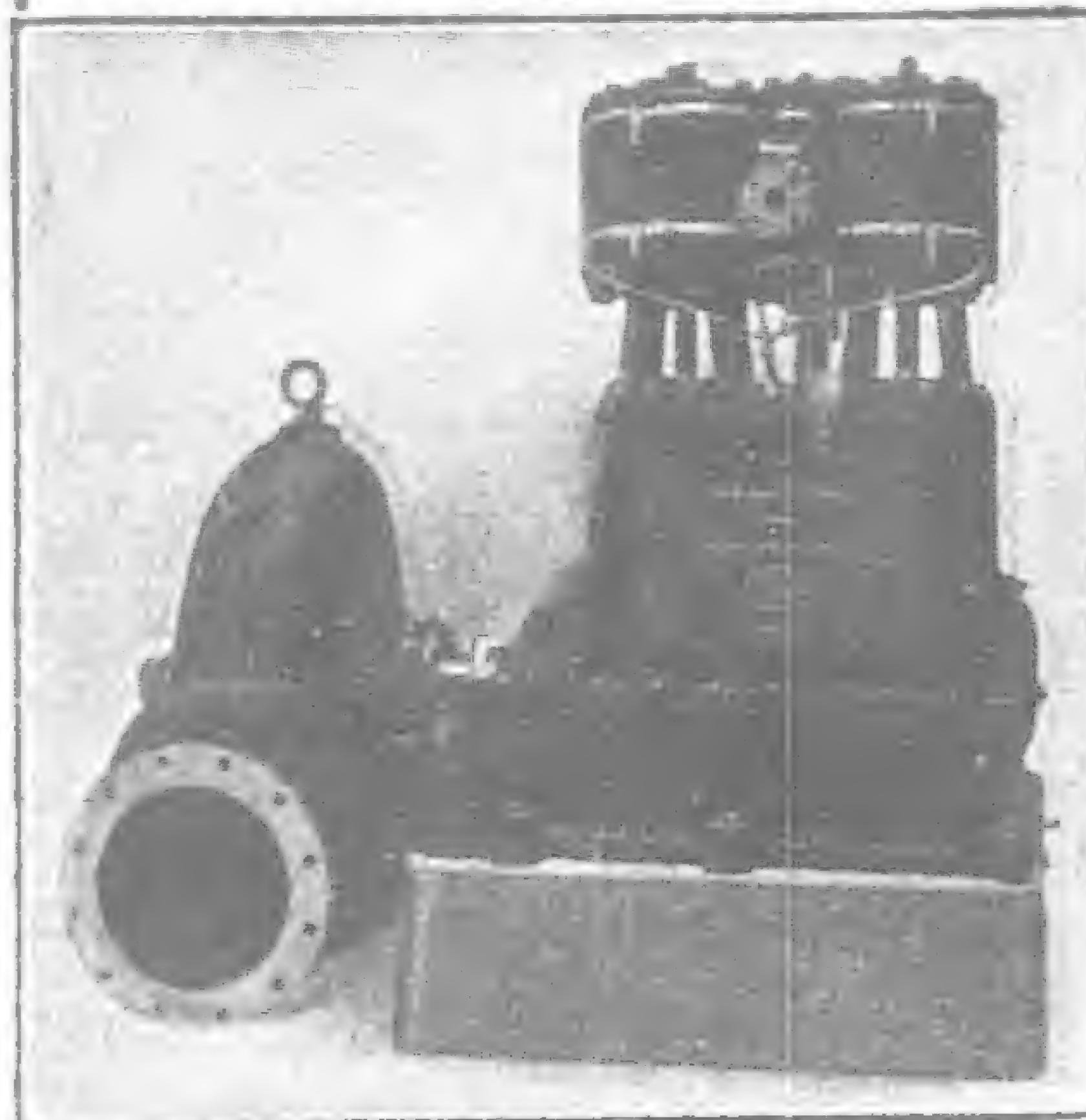
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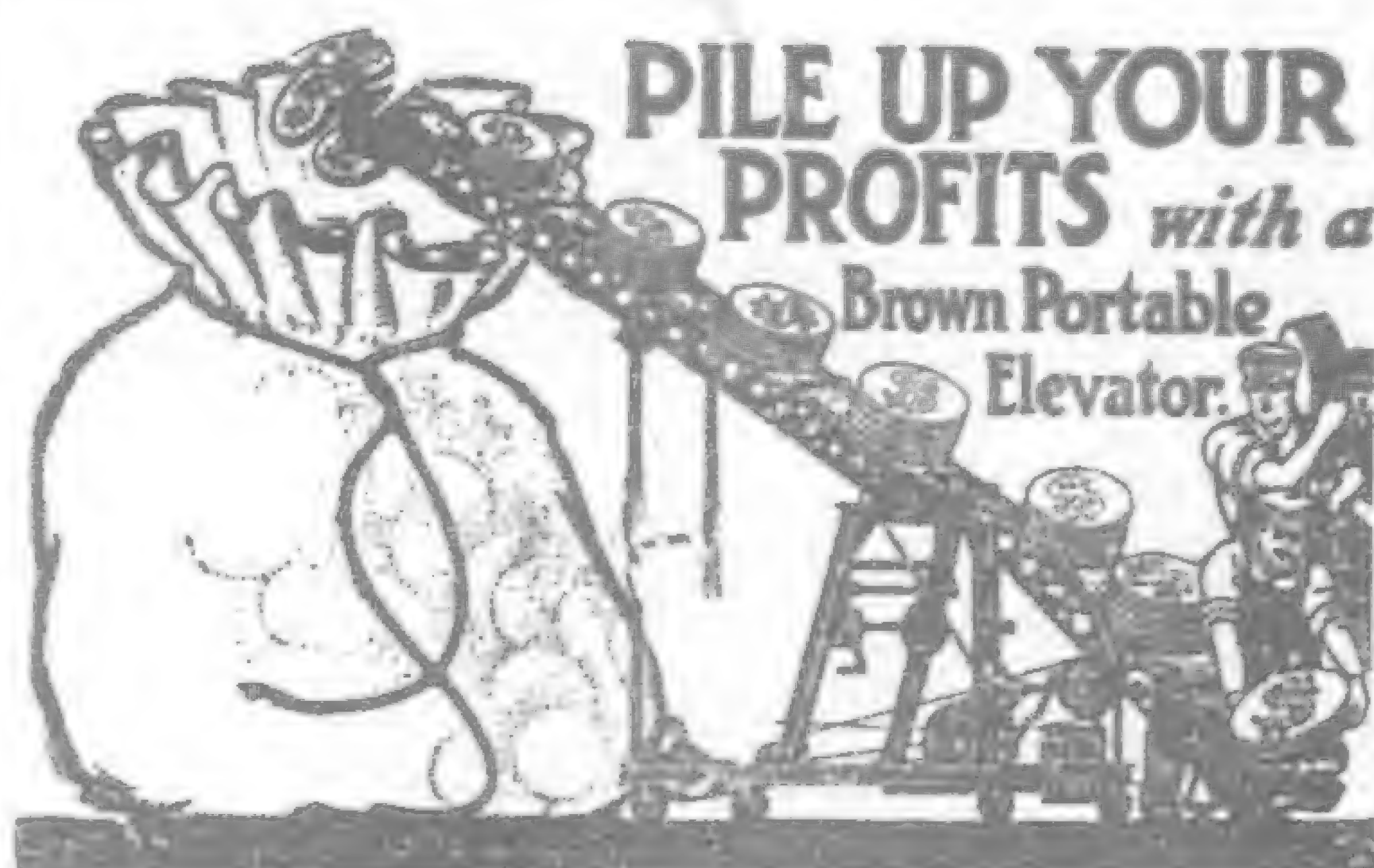
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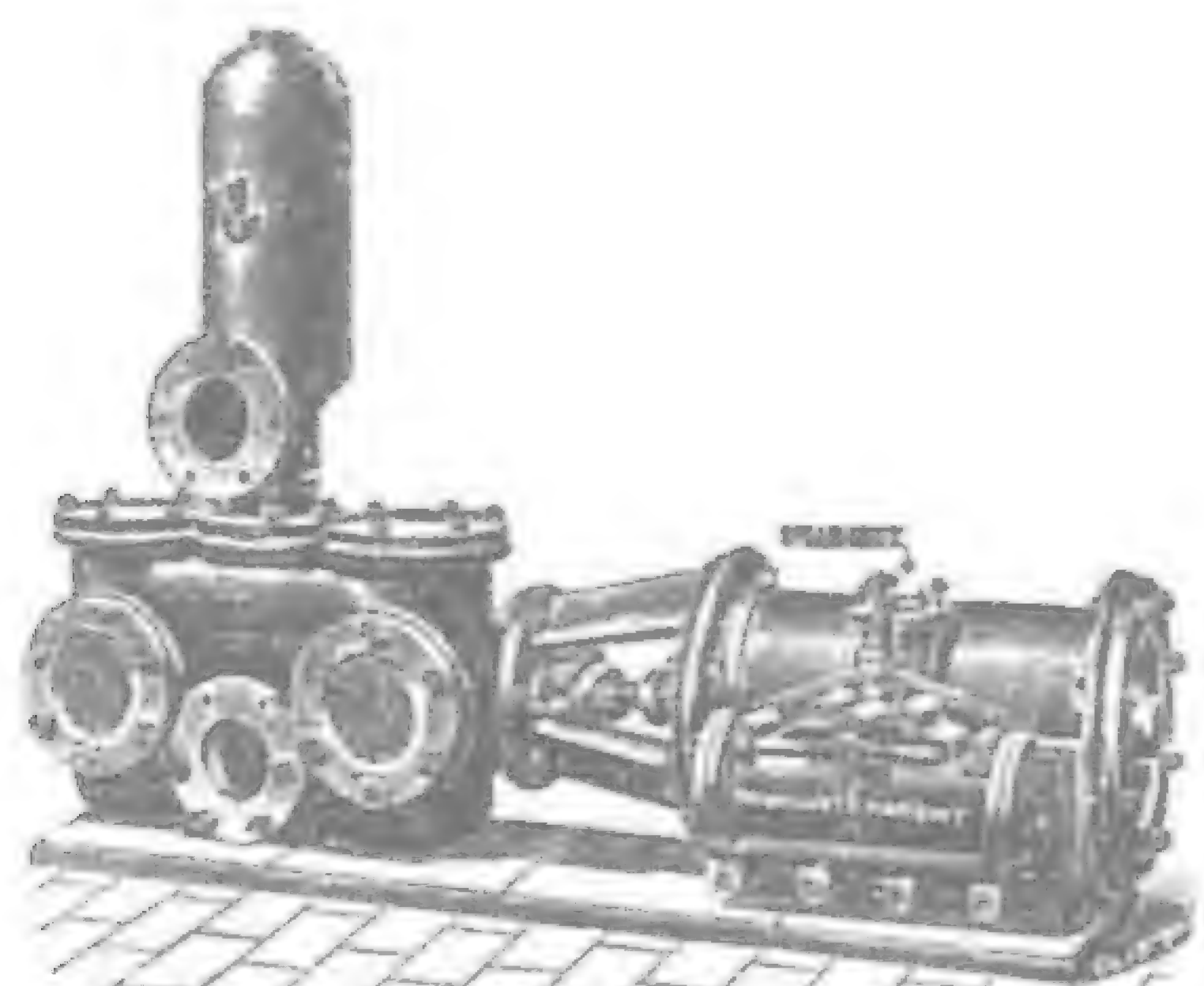
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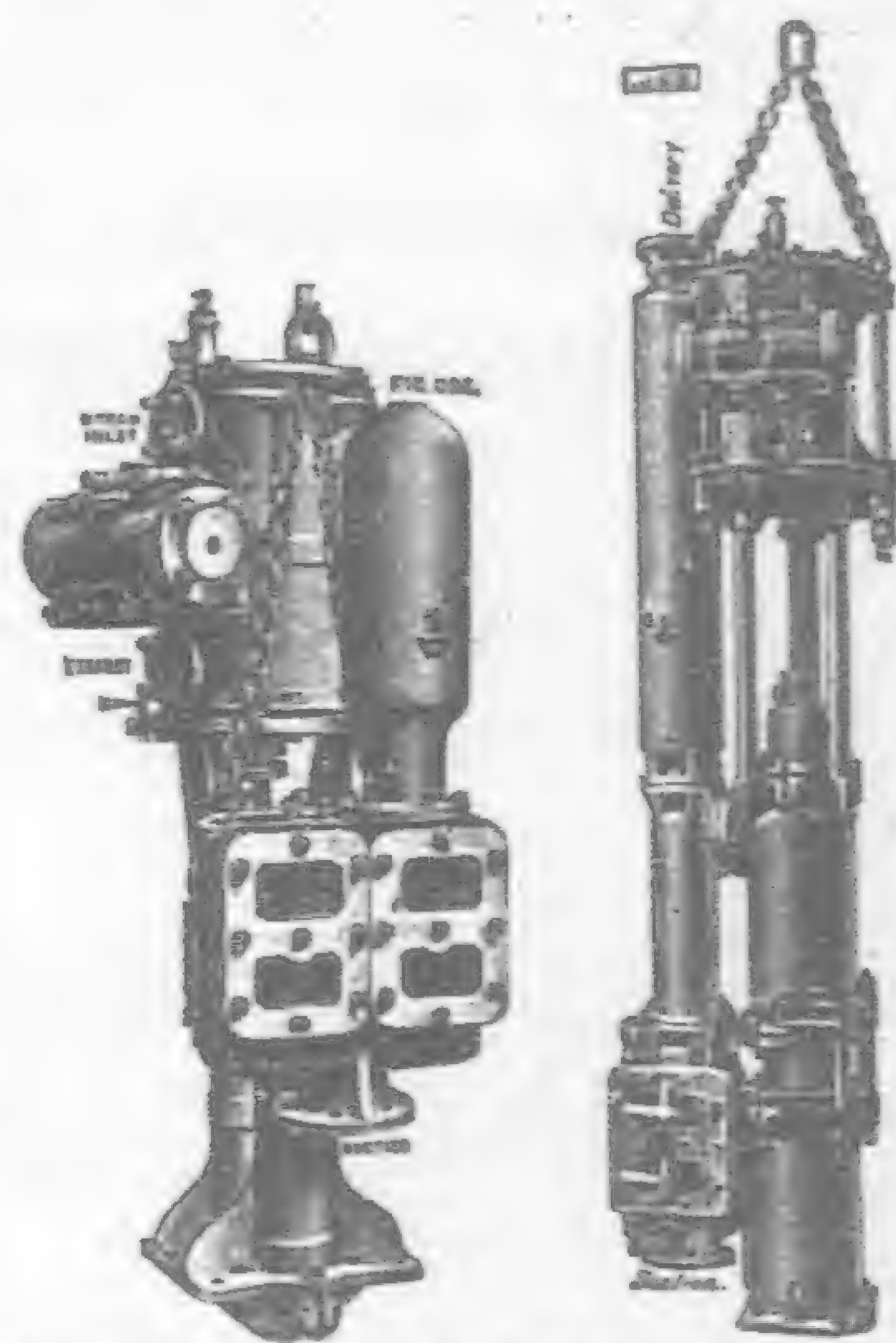
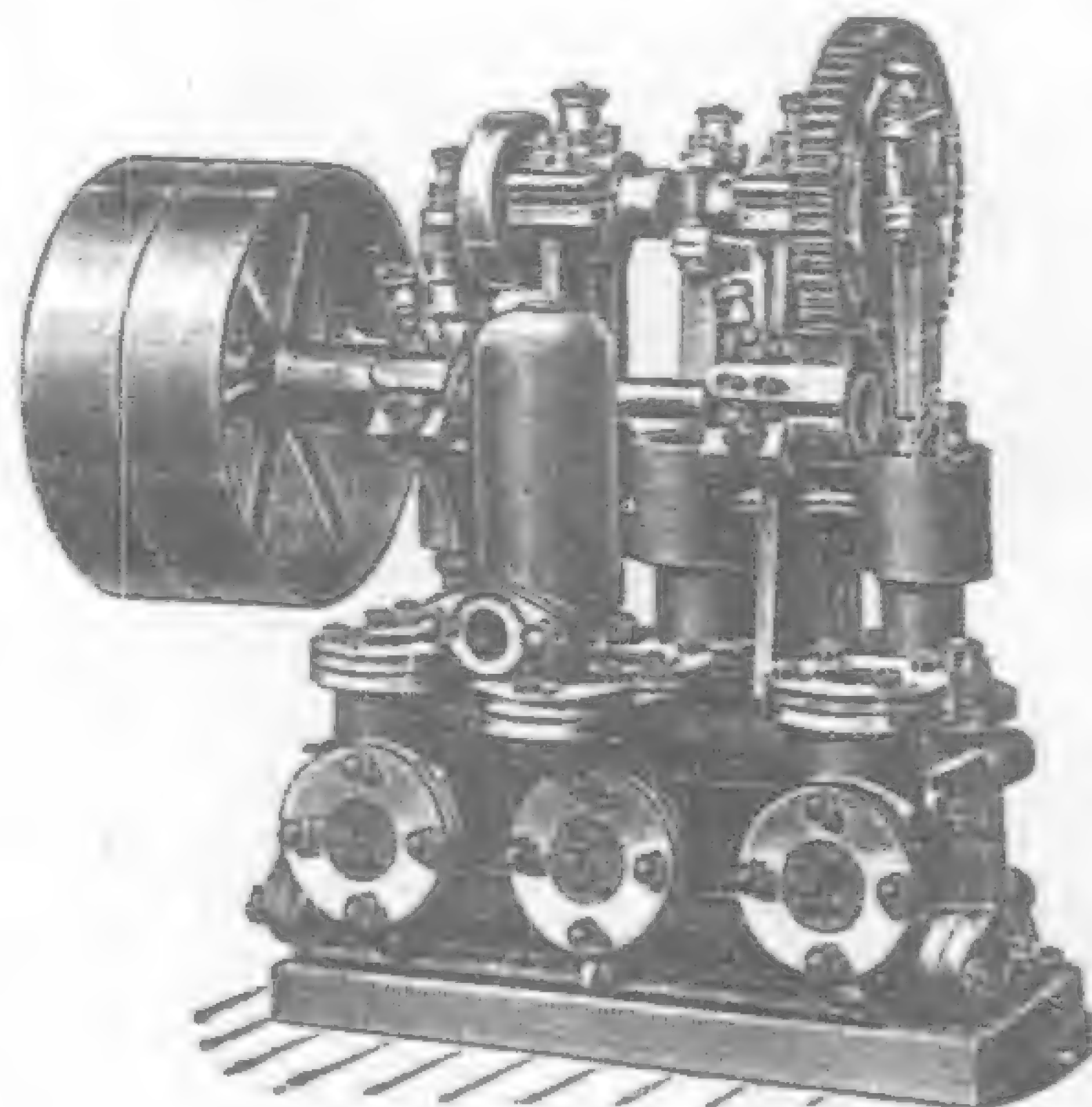
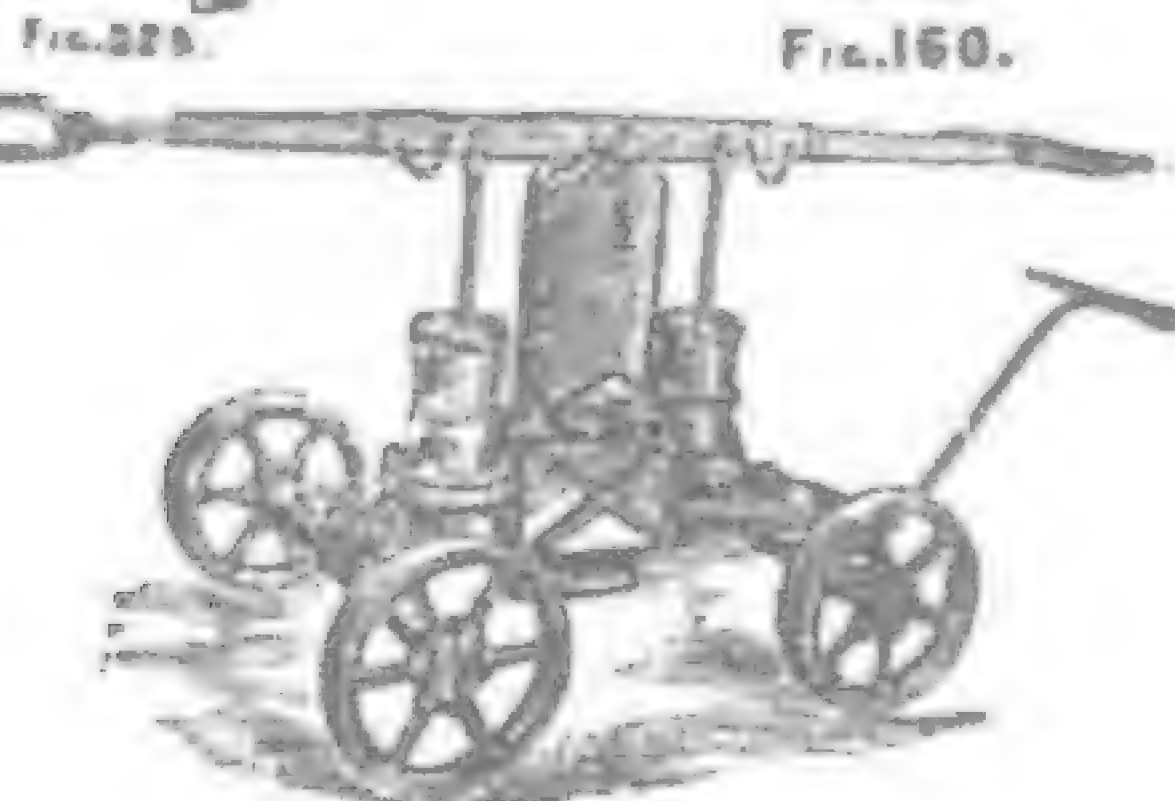
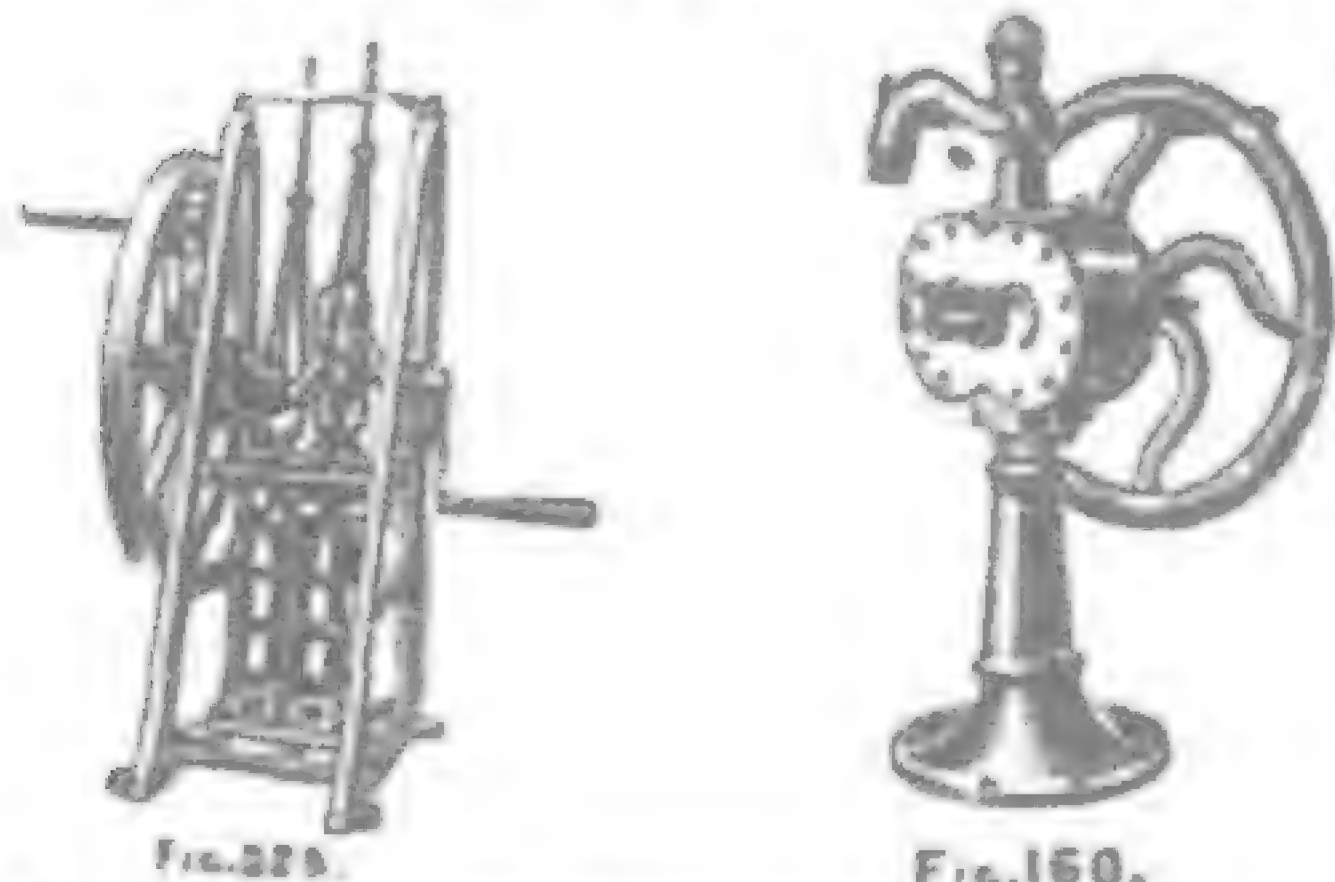
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Fig. 158.

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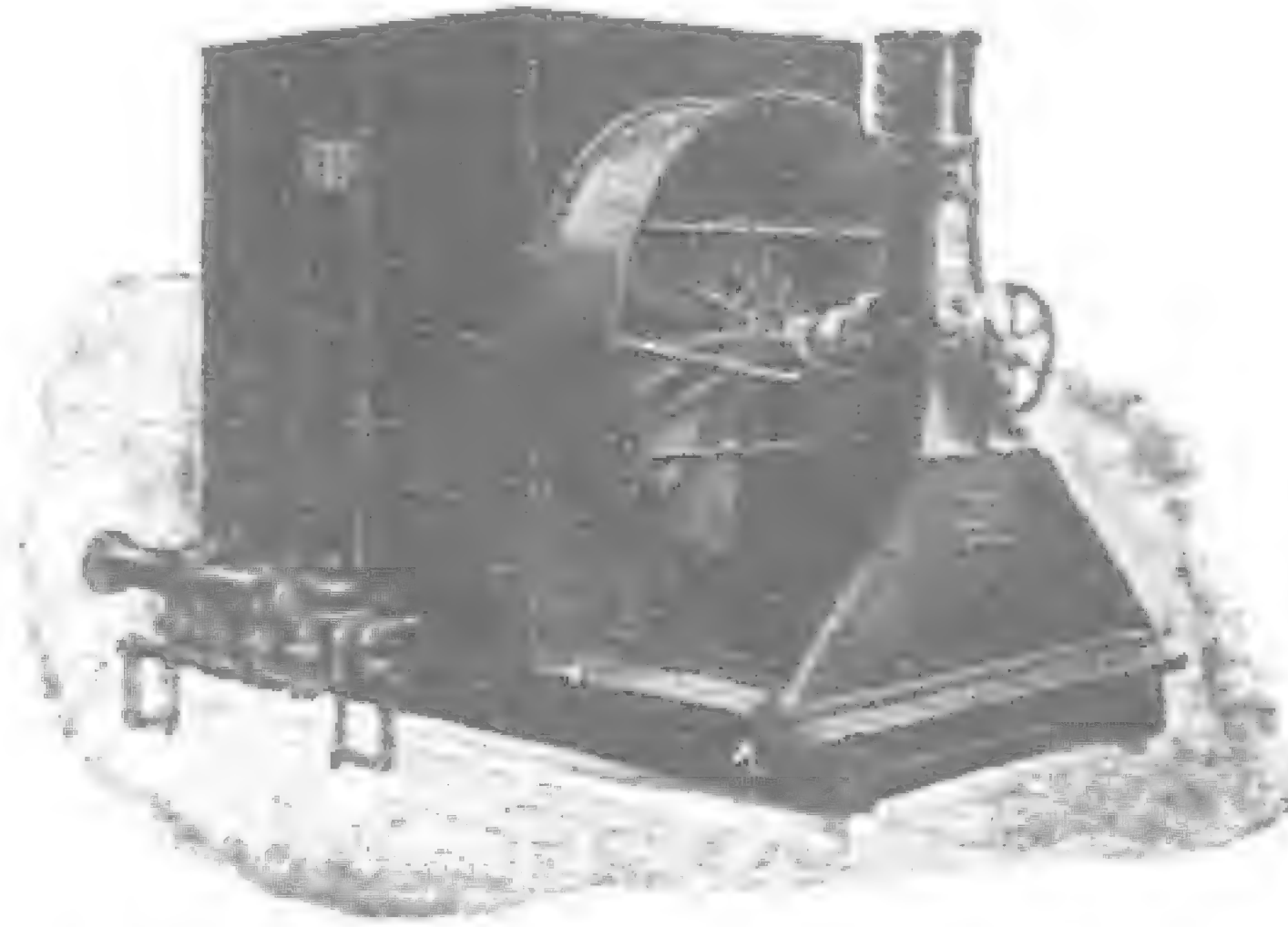
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Fig. 159.

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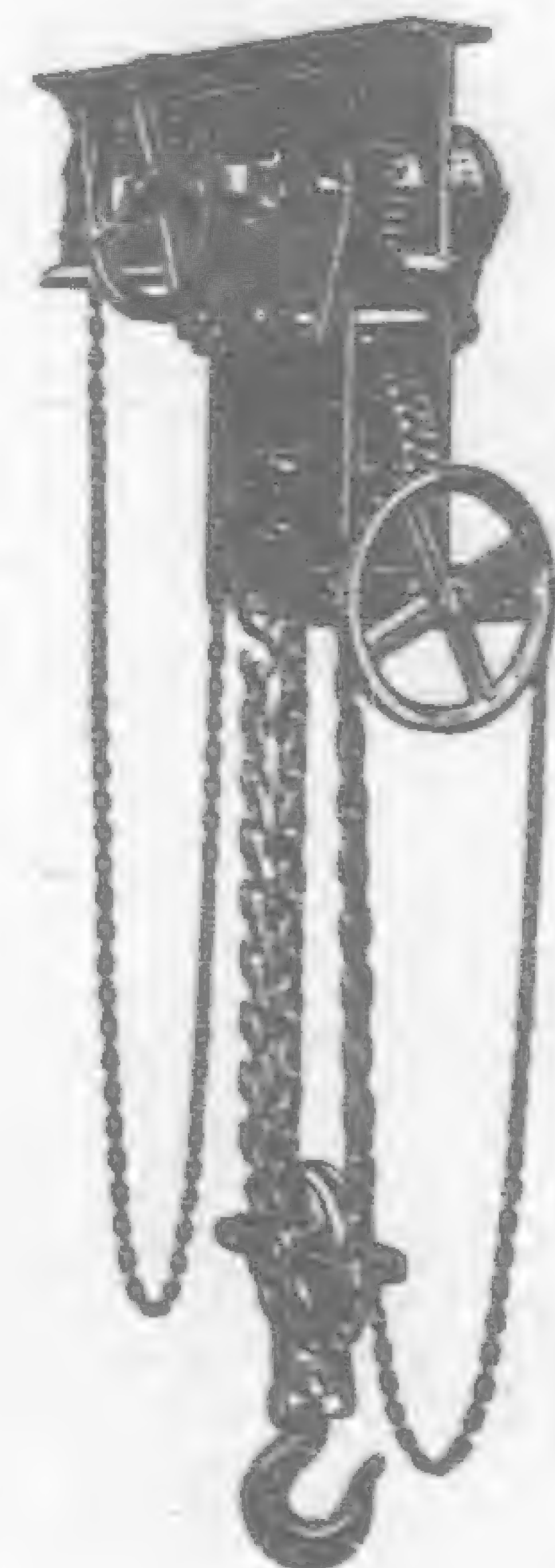
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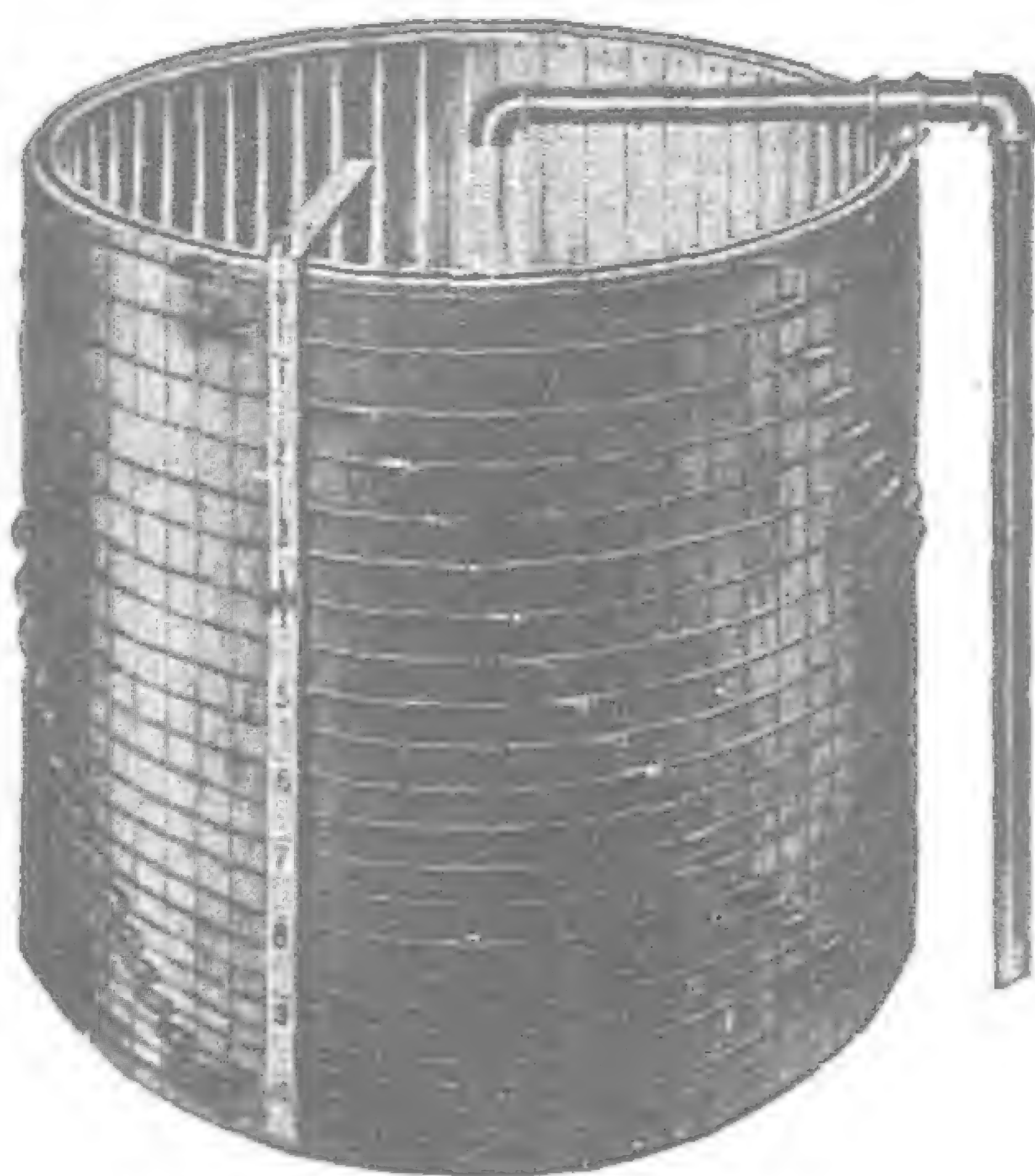
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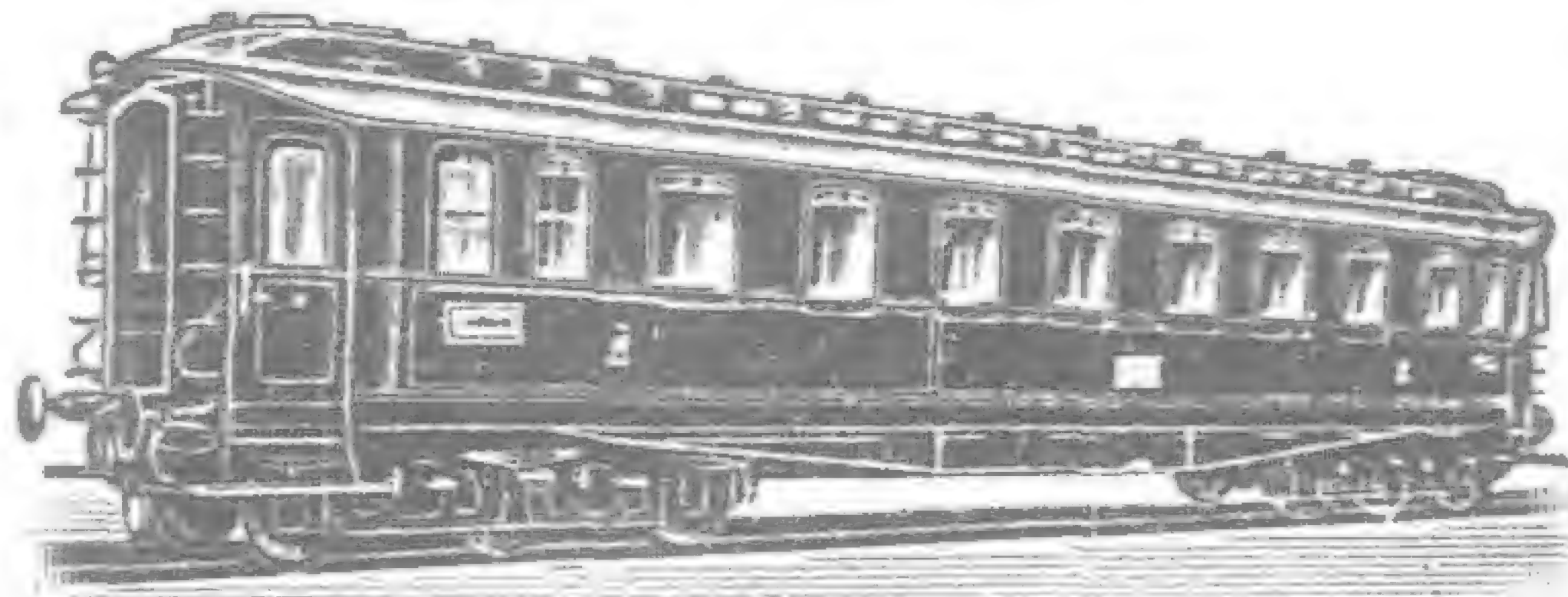
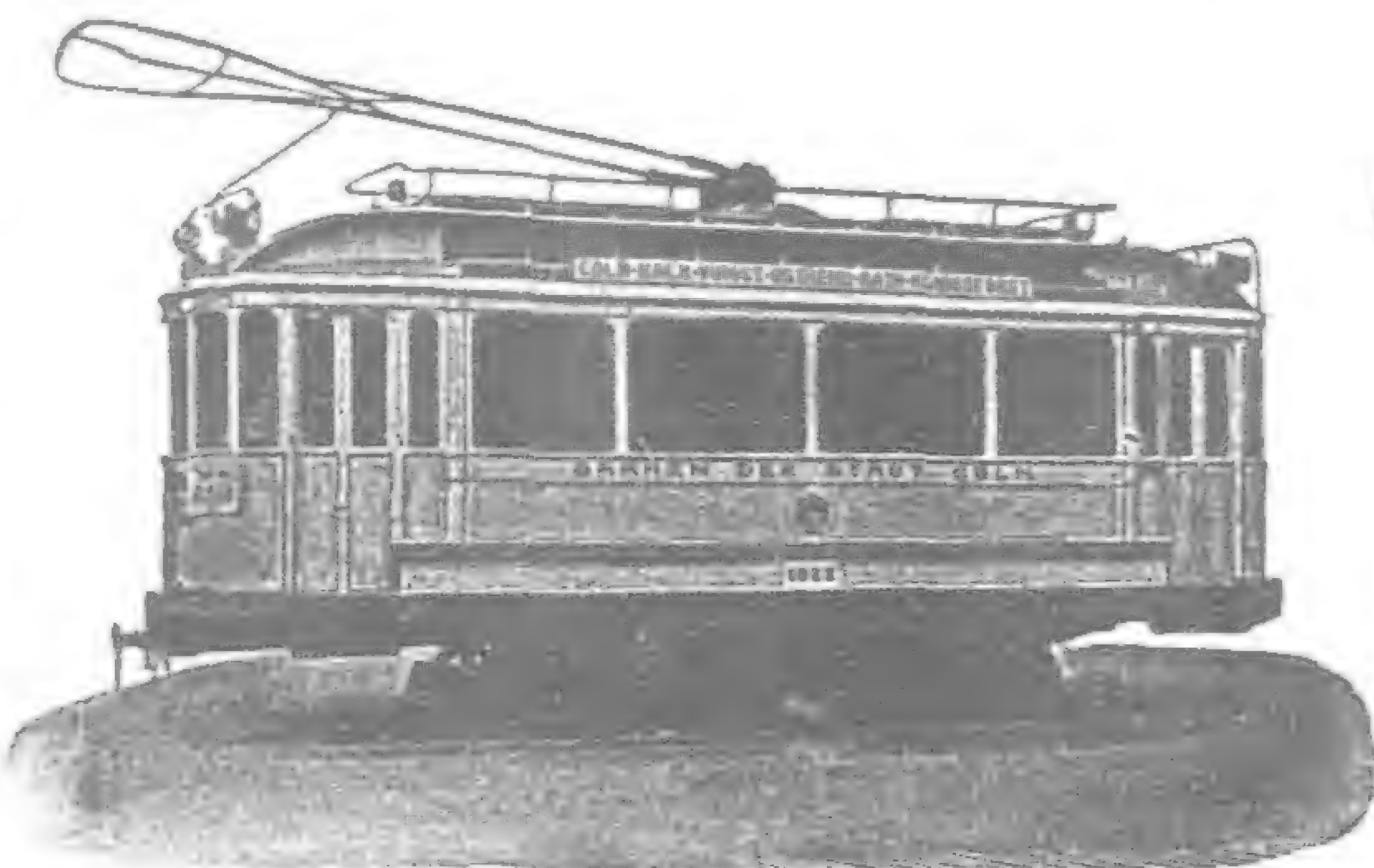
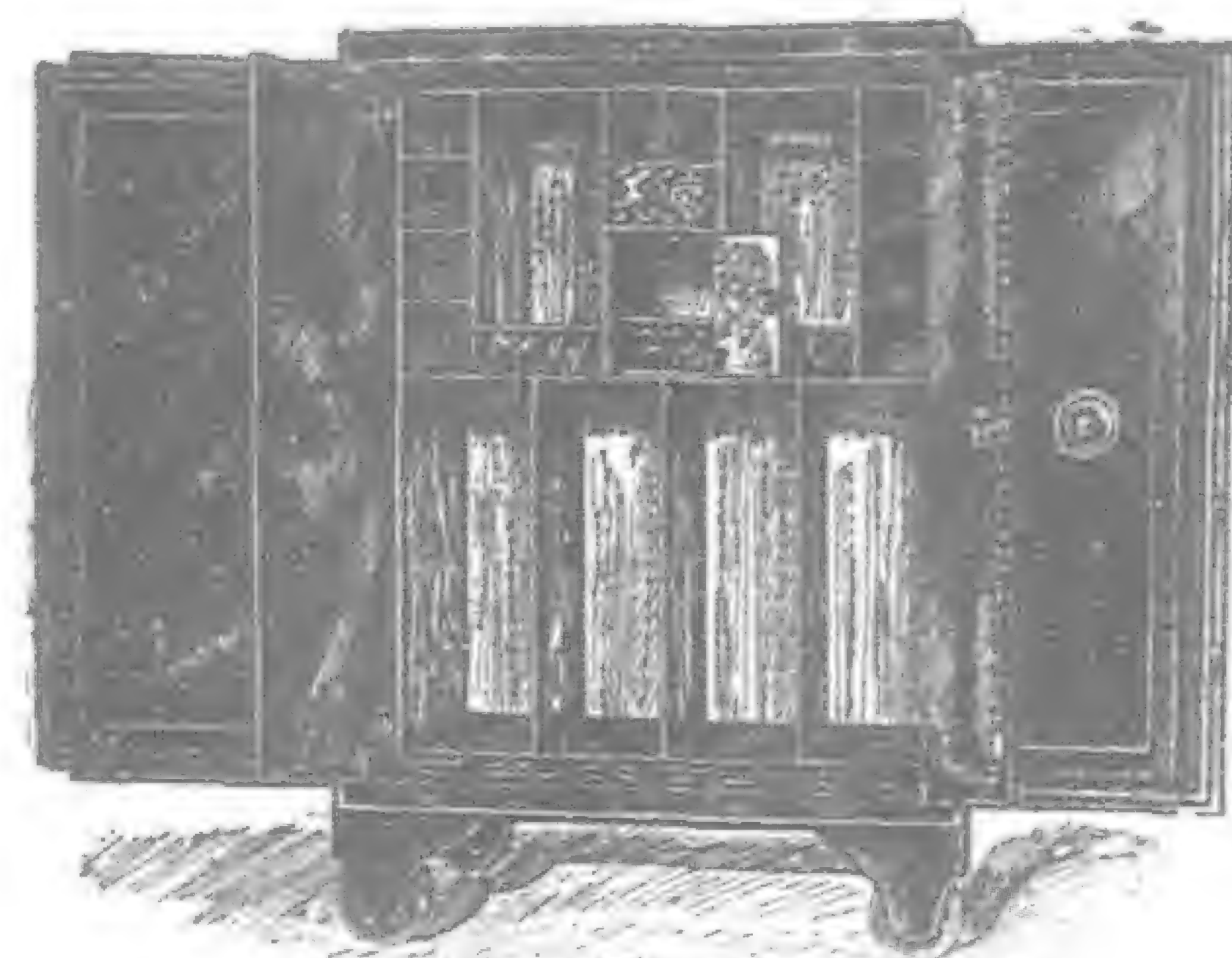
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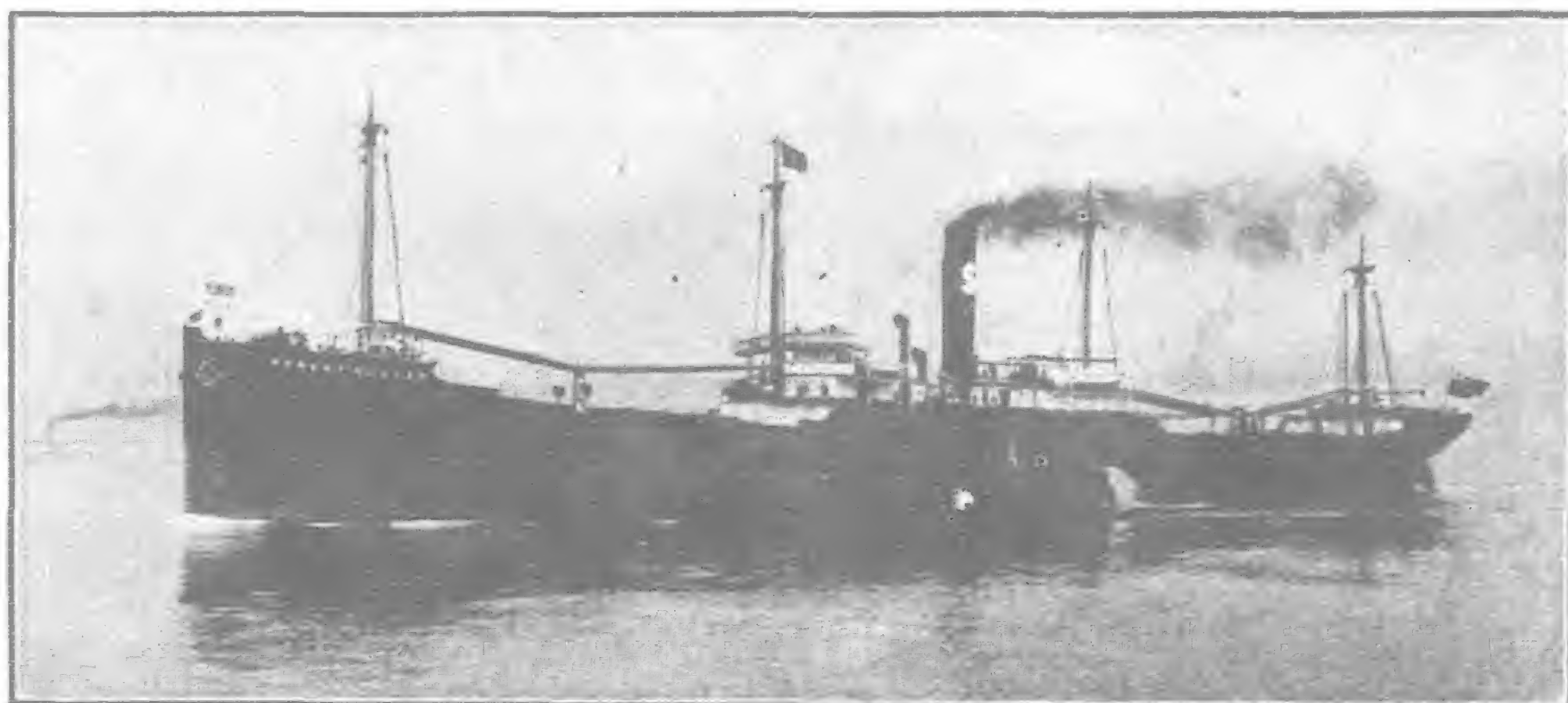
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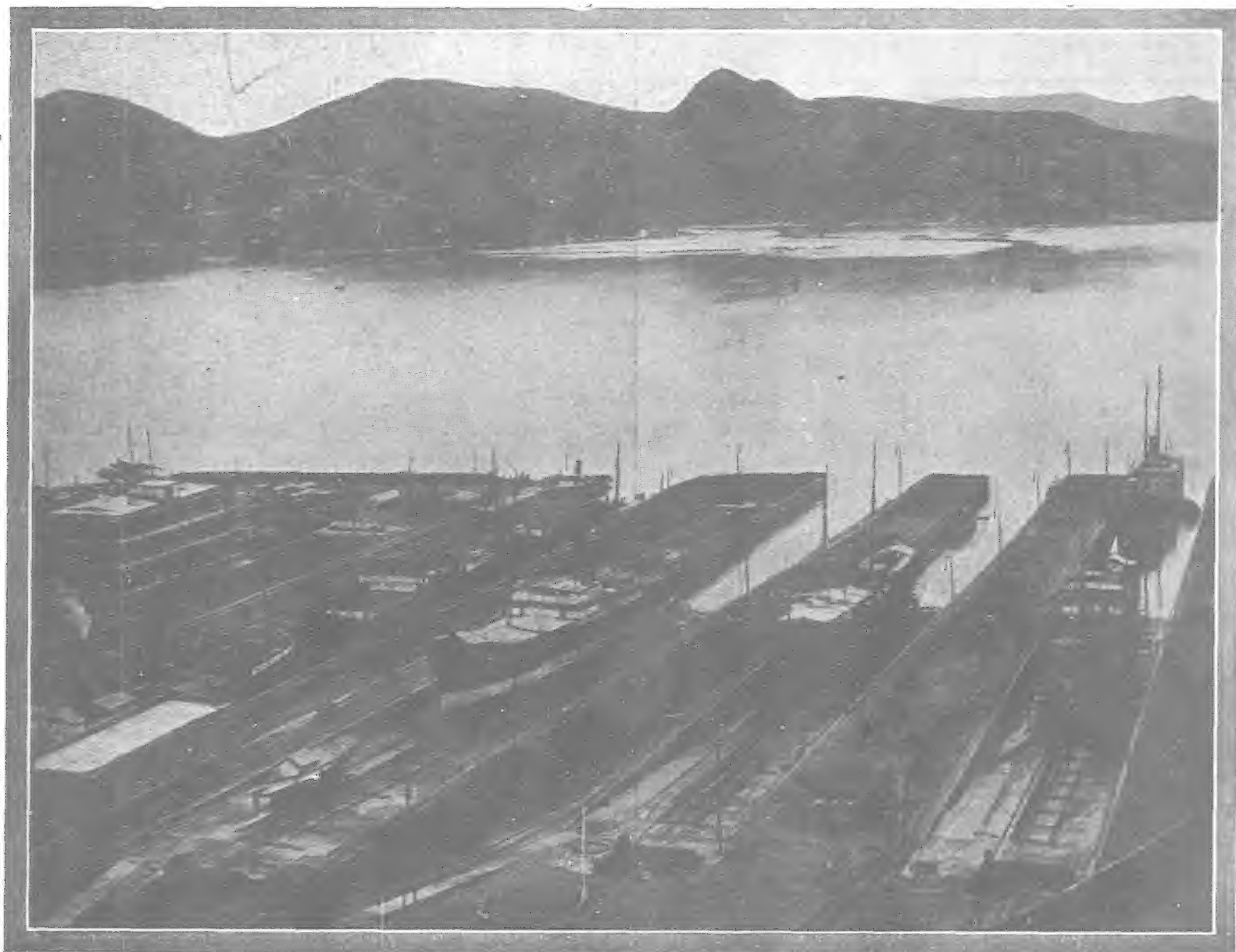
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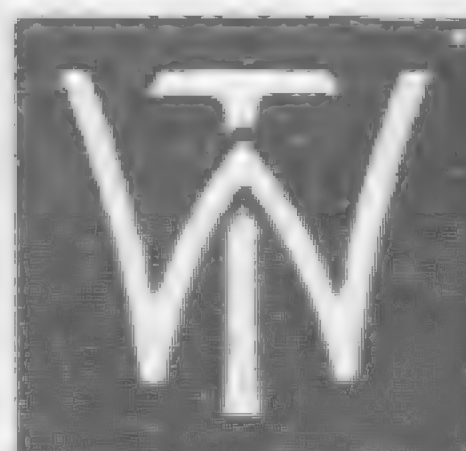
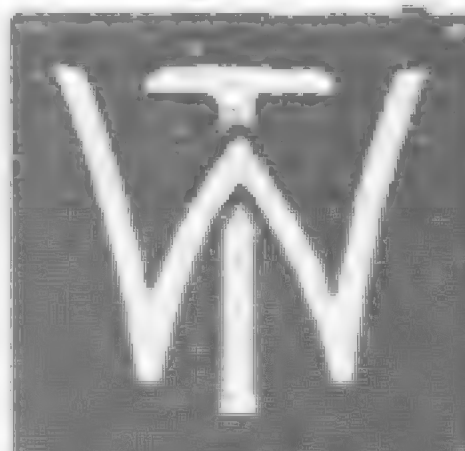
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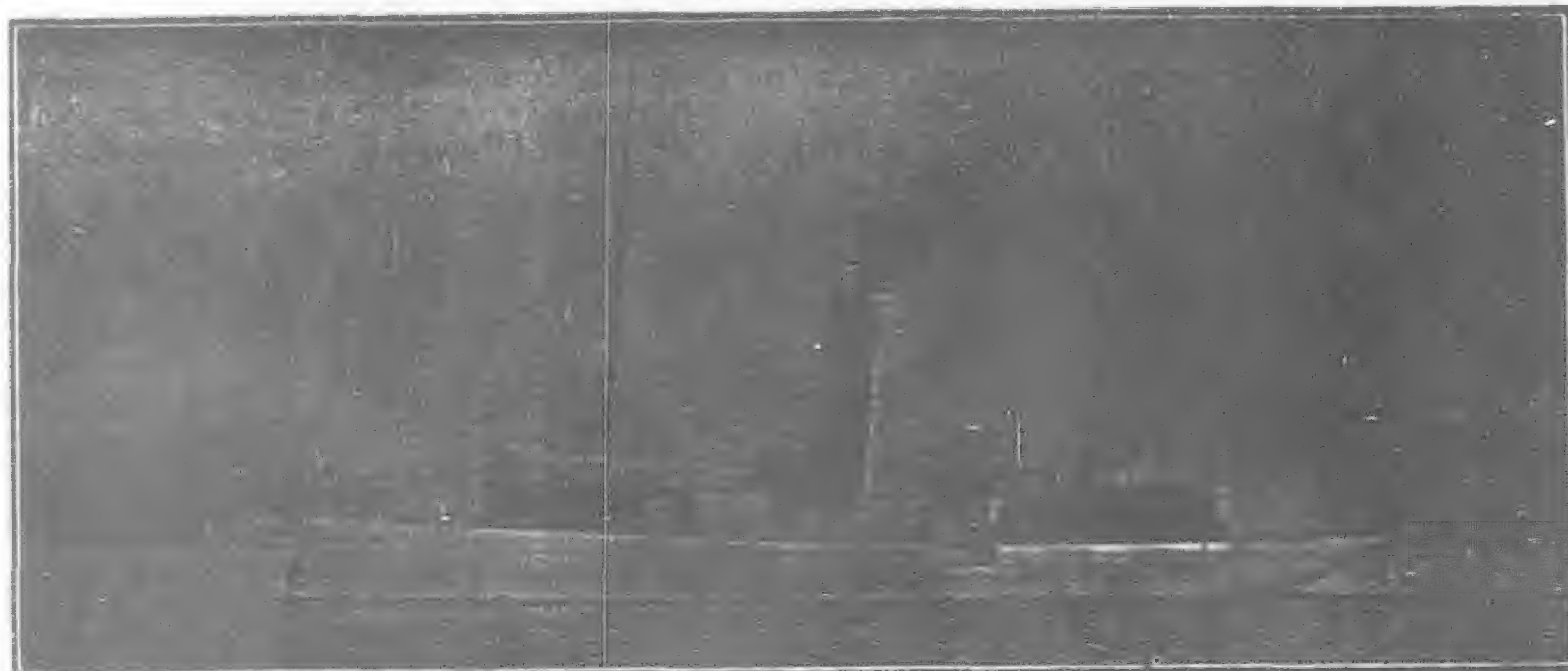
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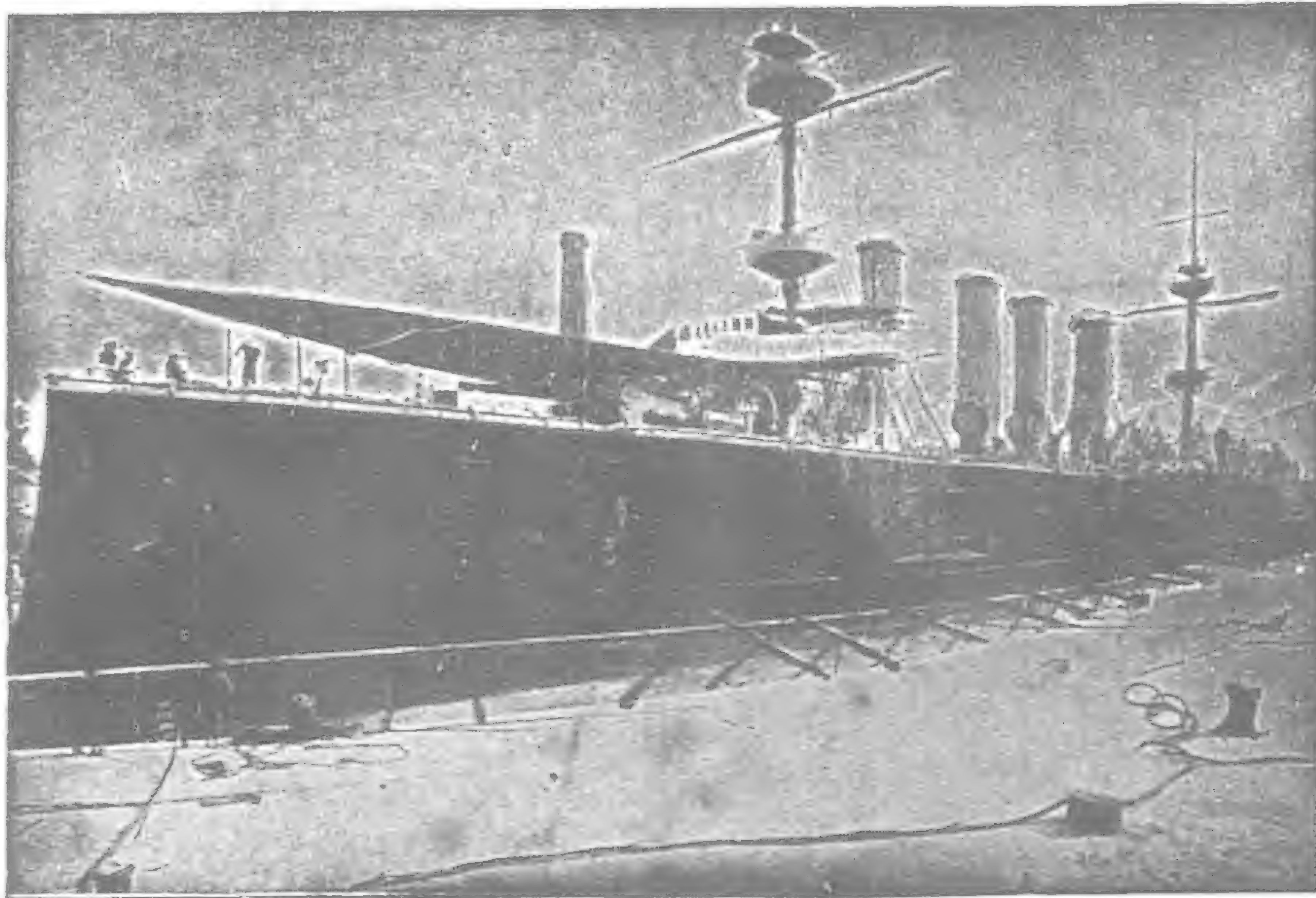
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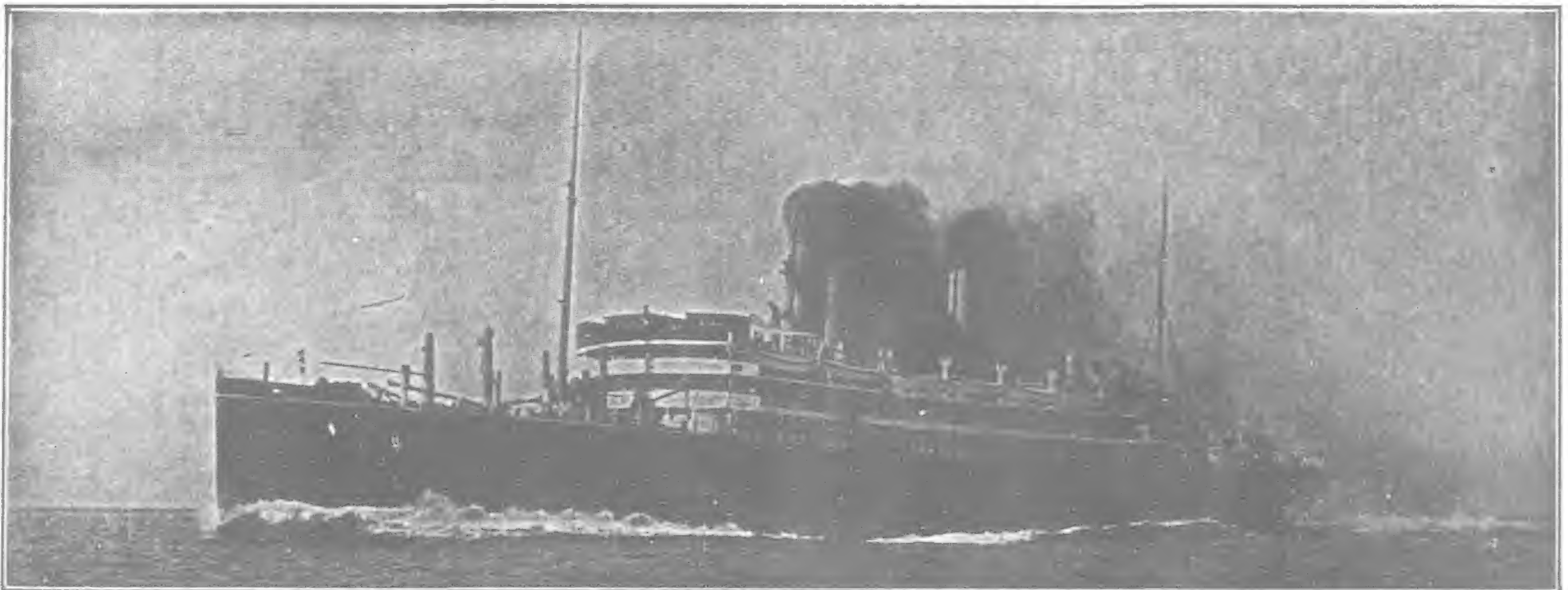
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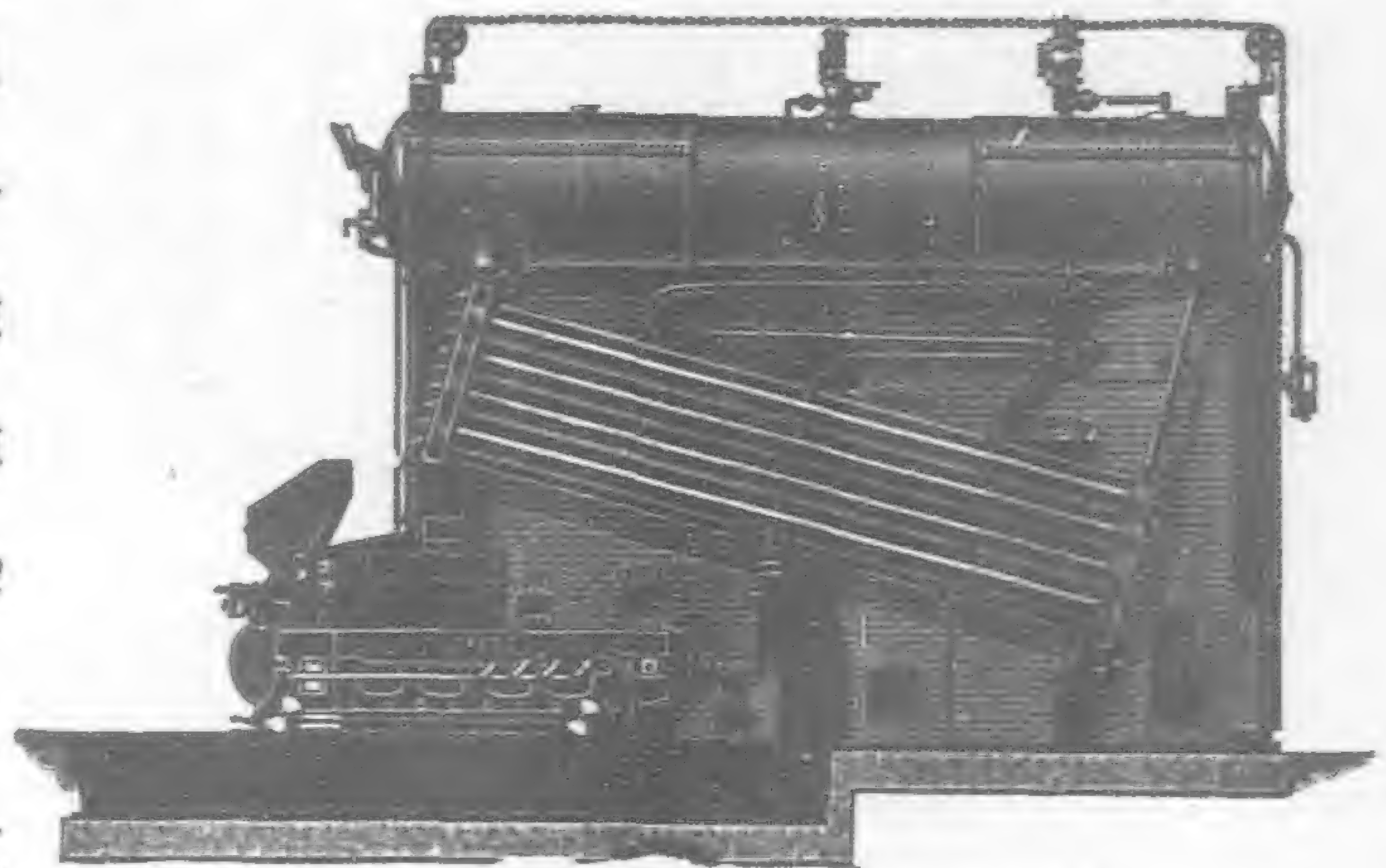
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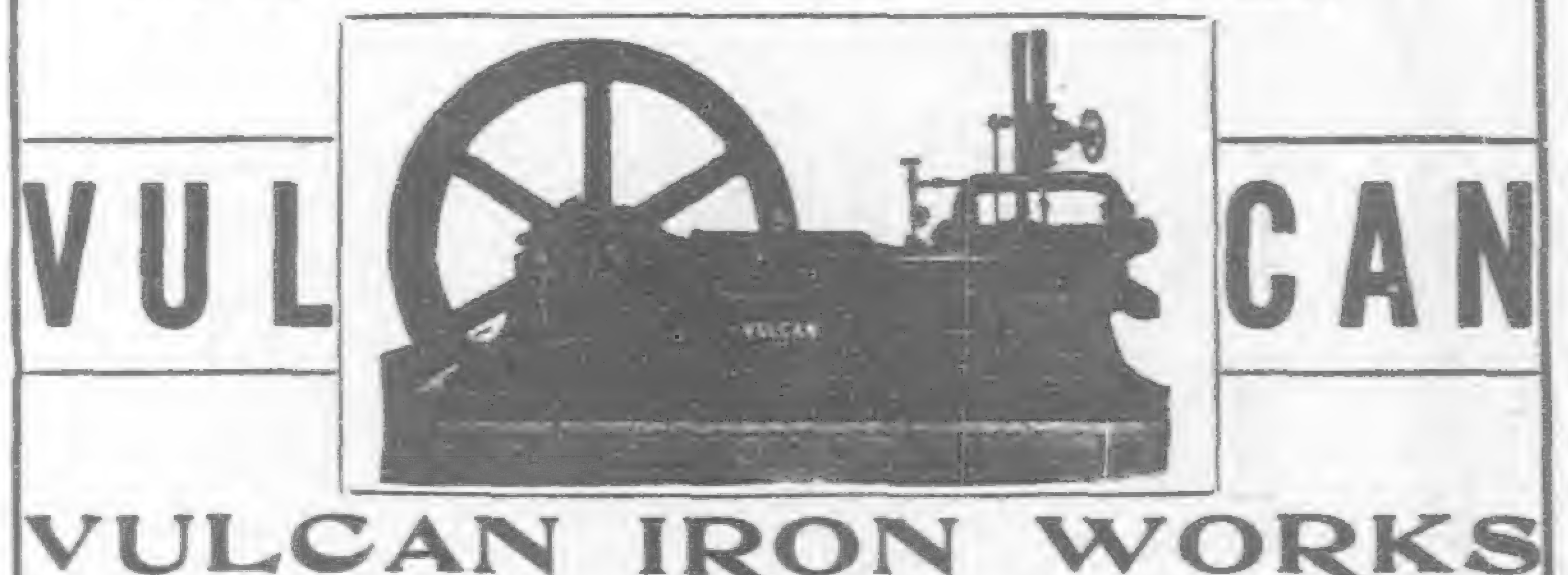
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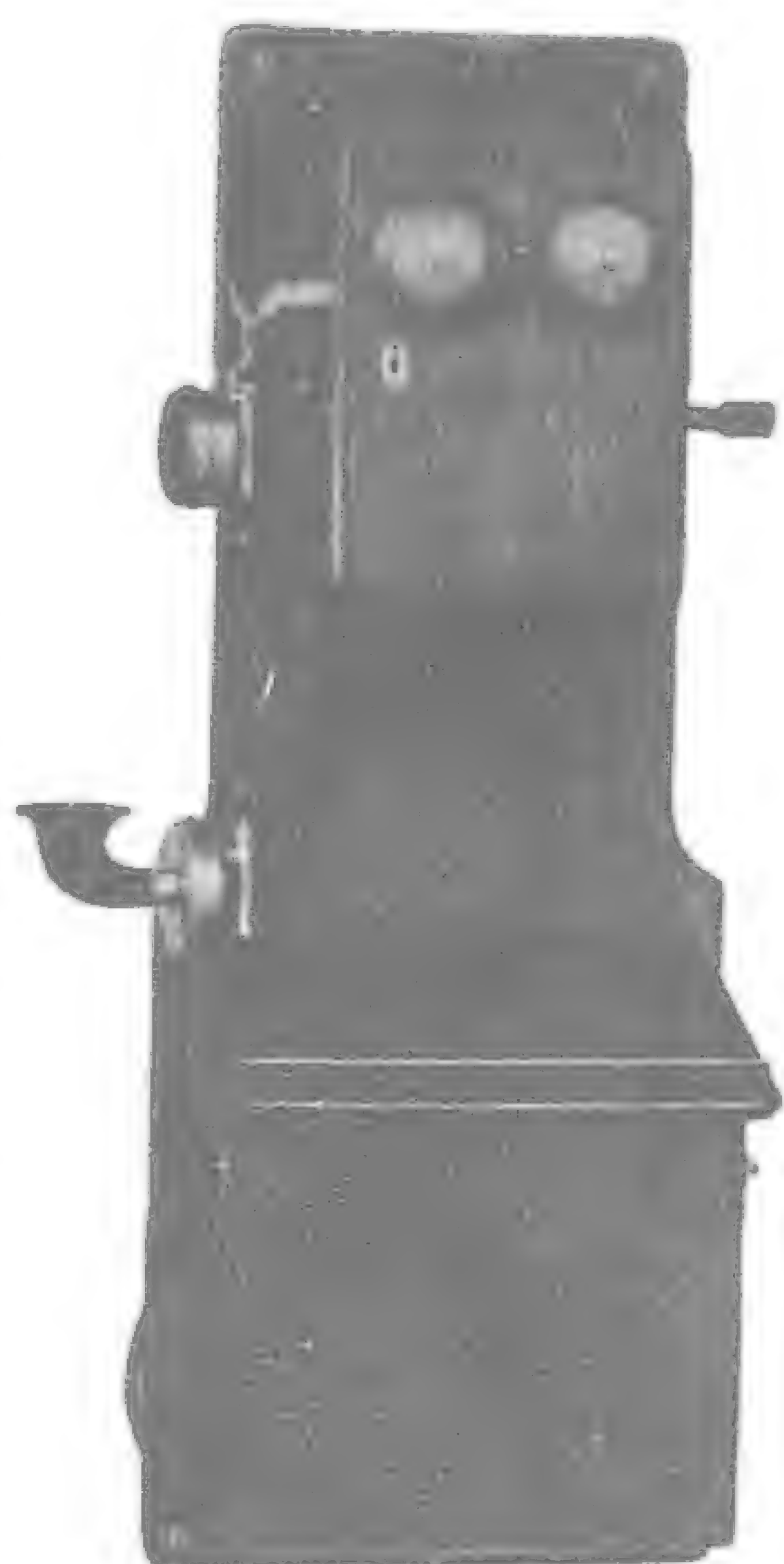
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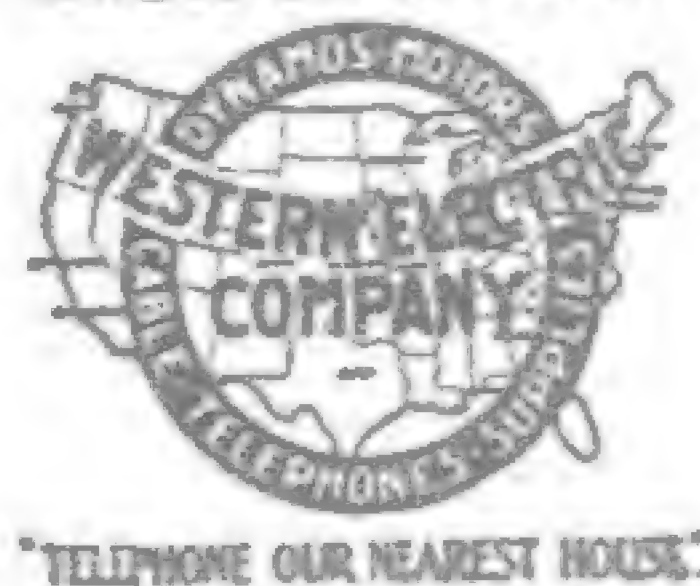
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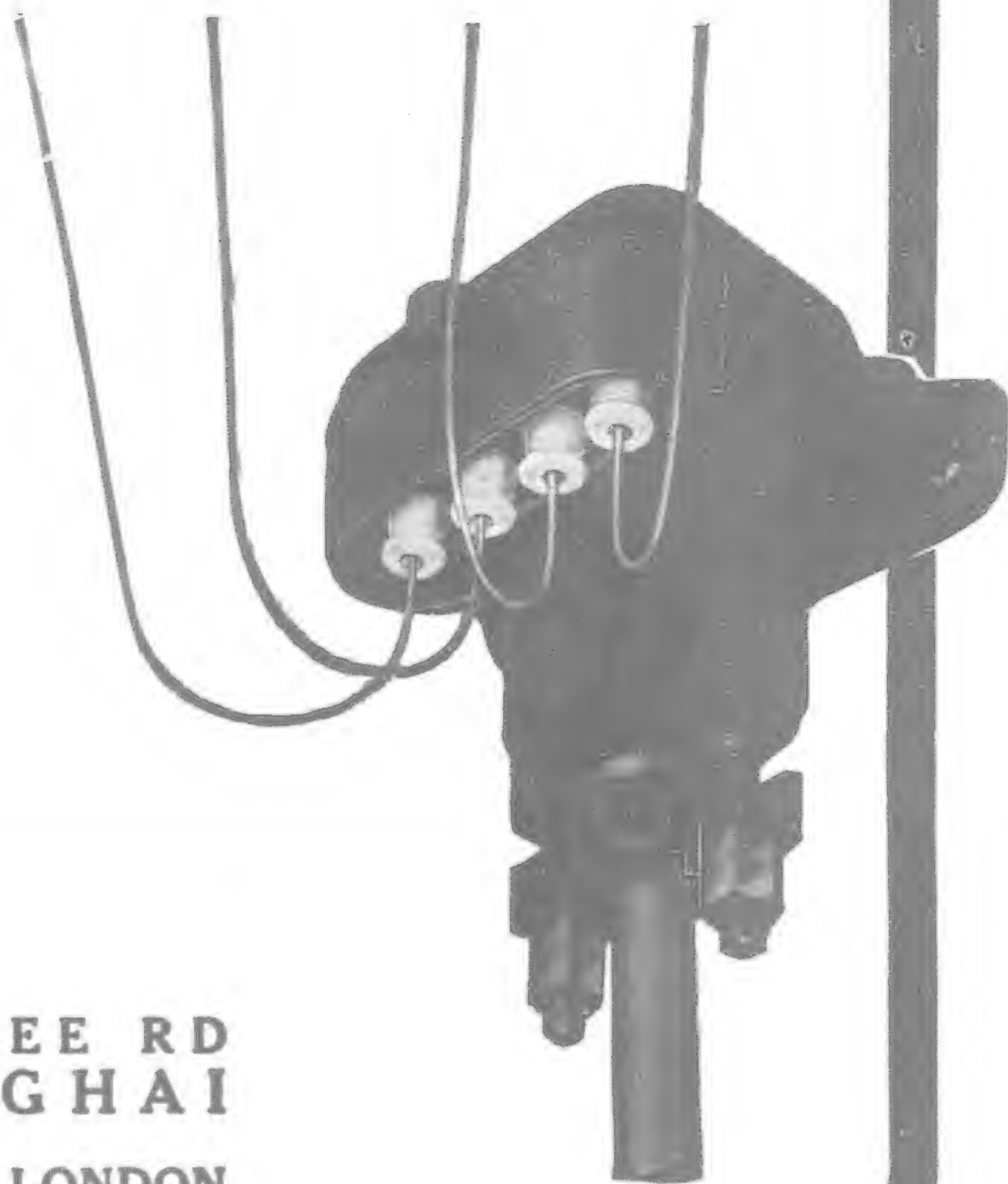
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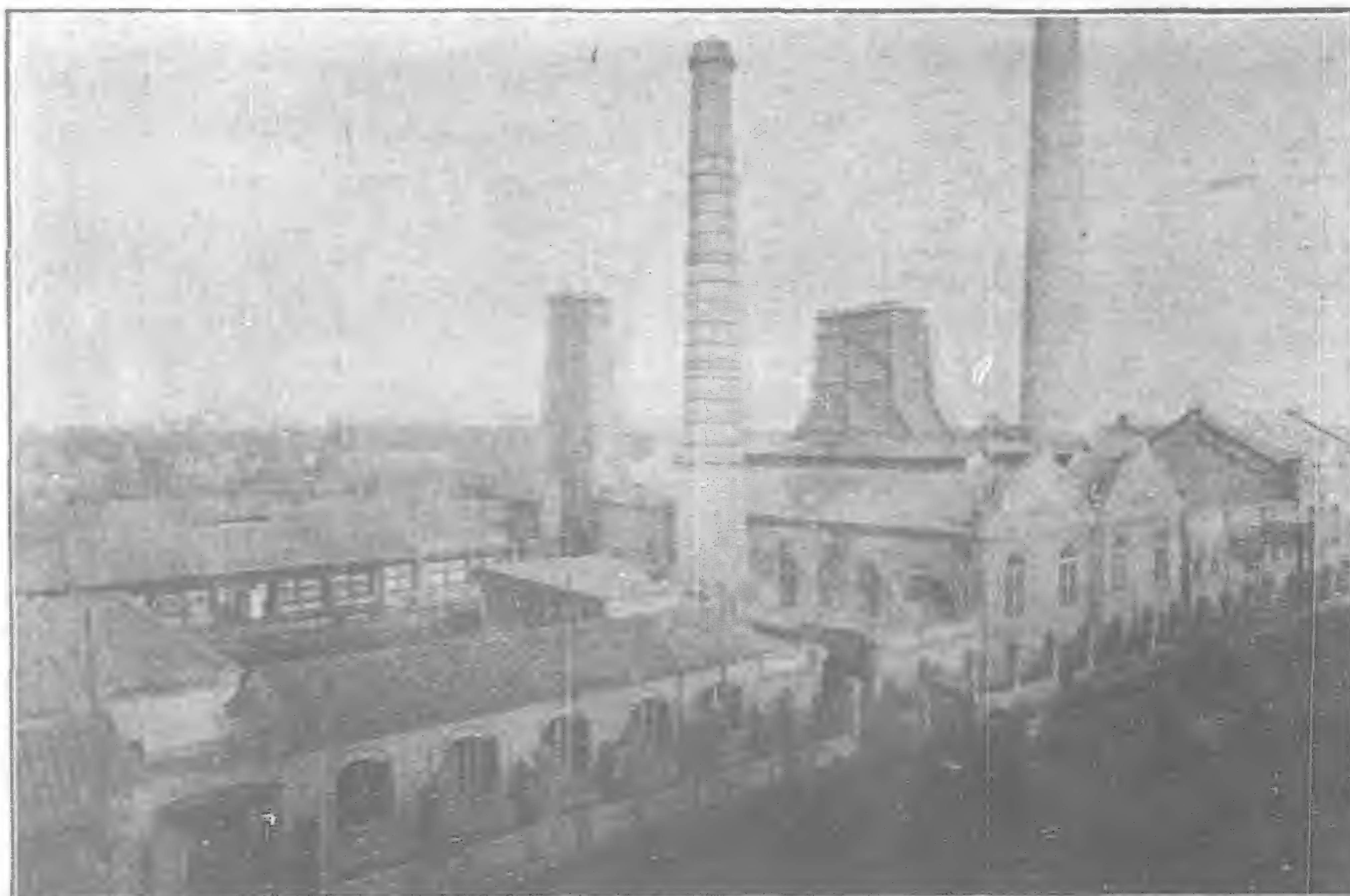
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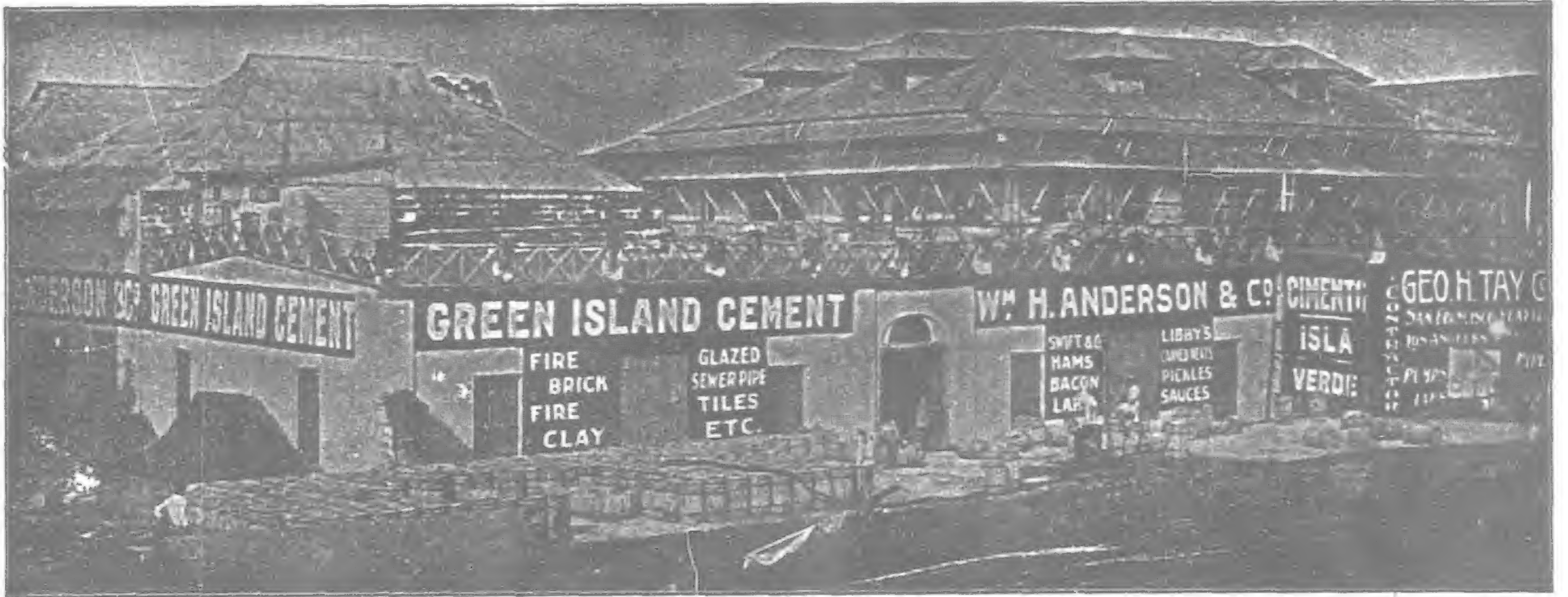
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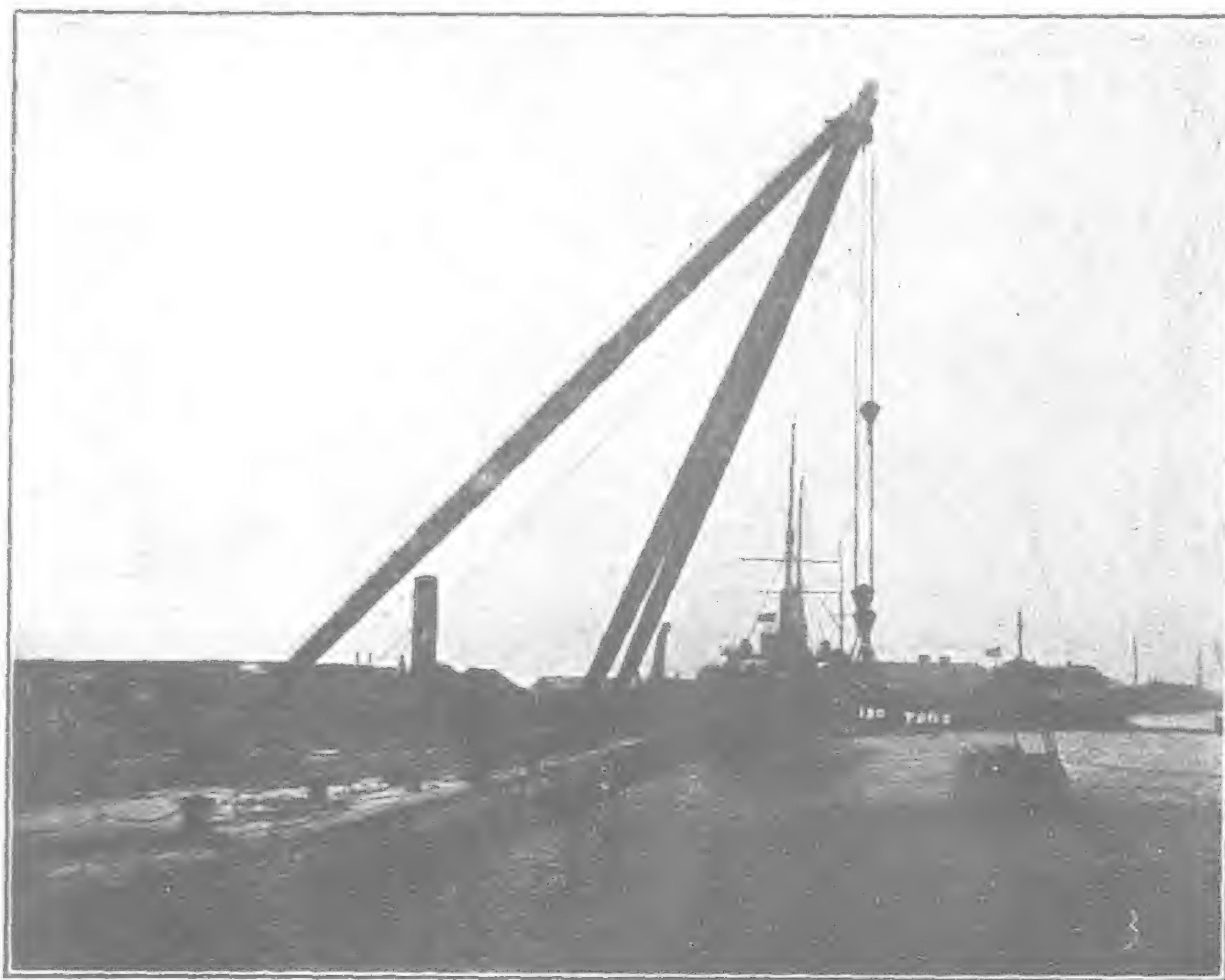
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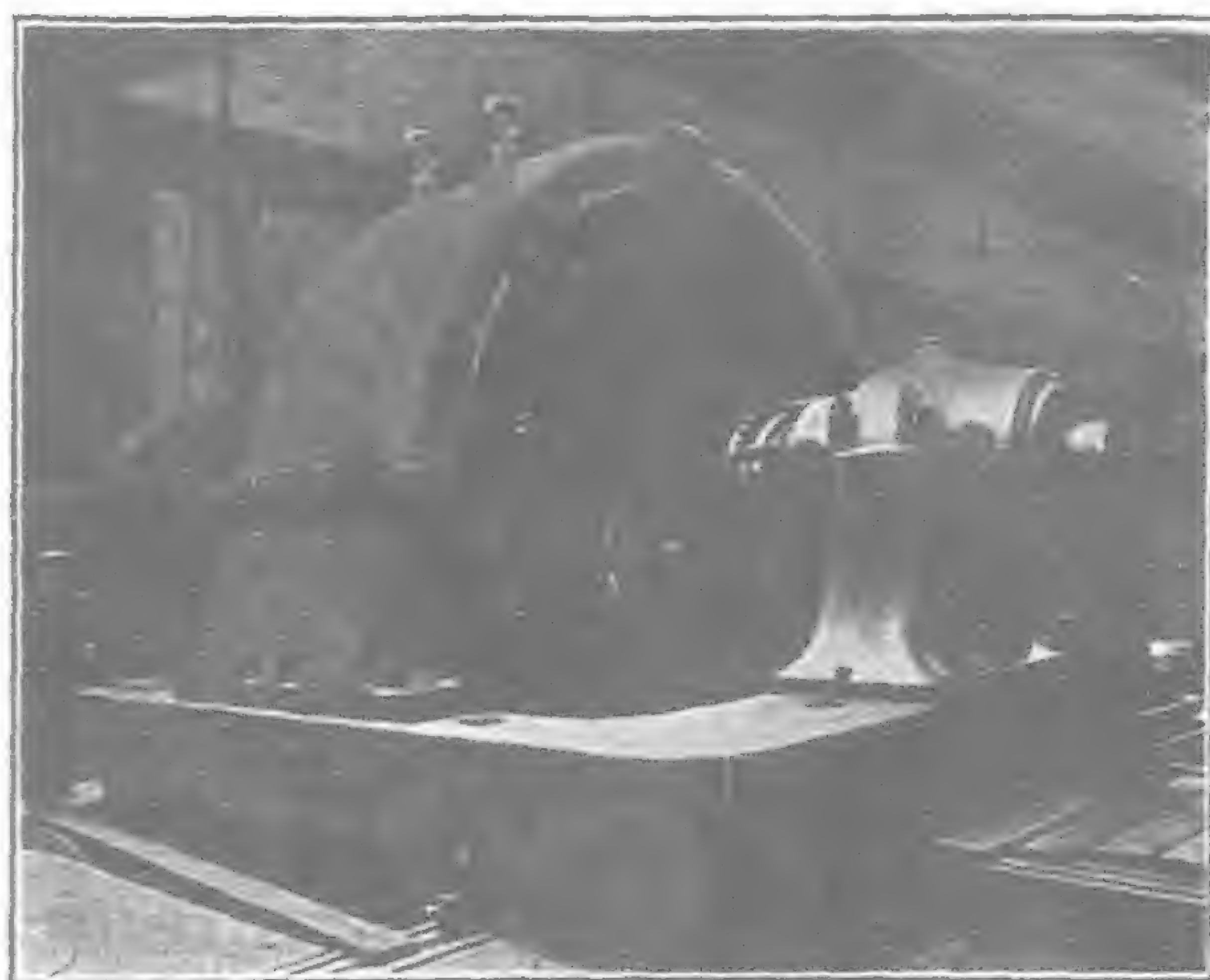
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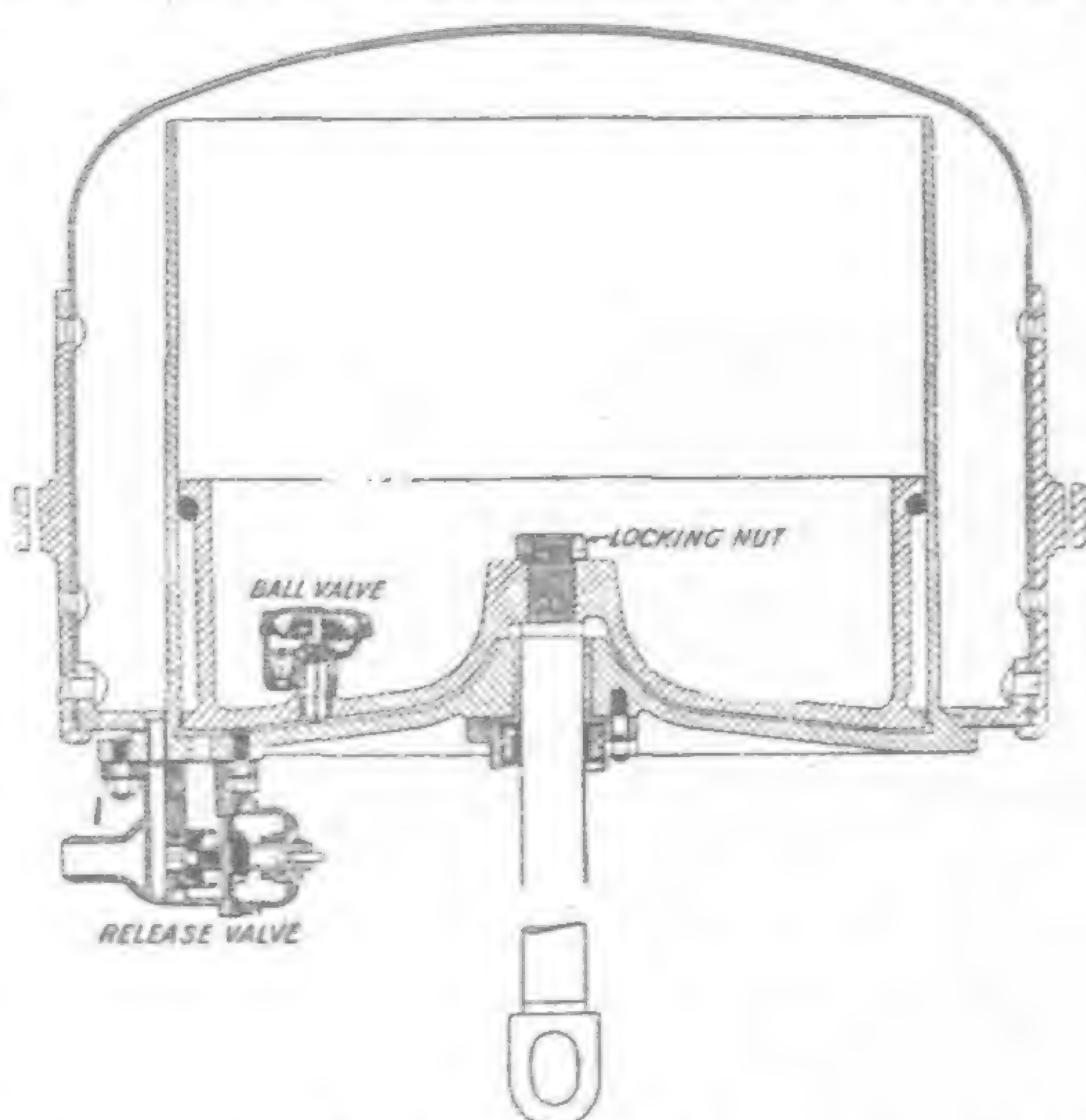
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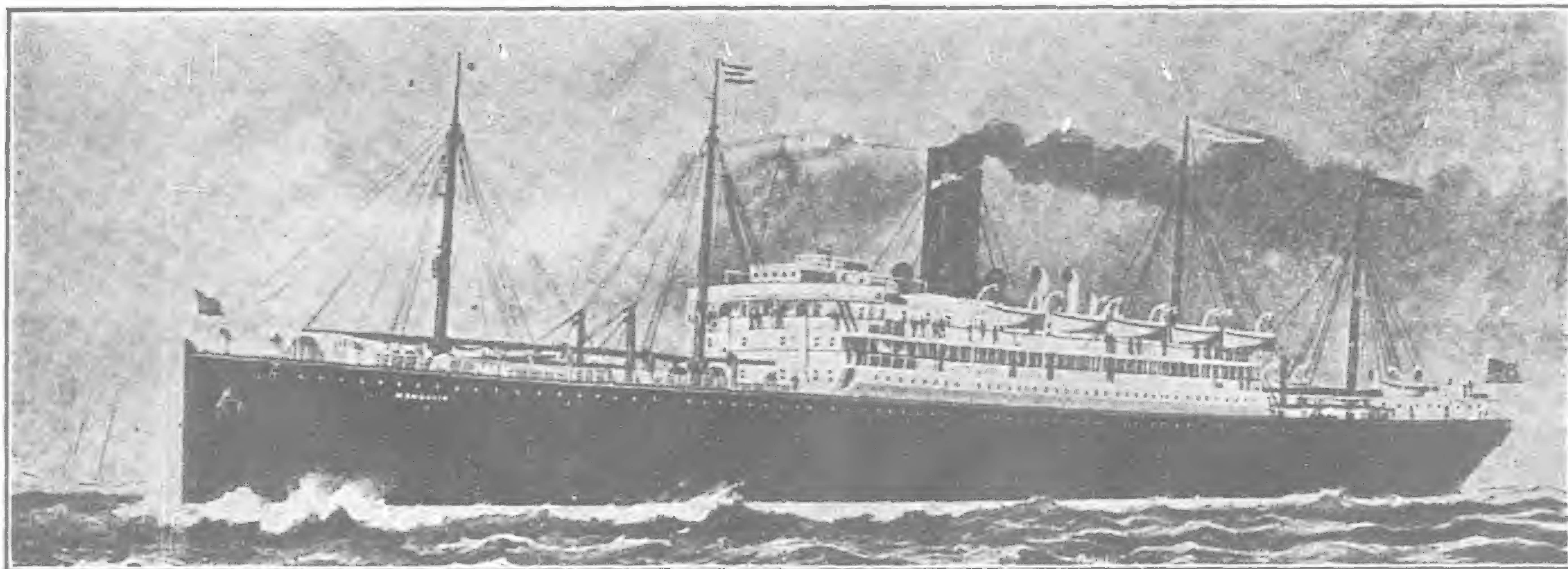
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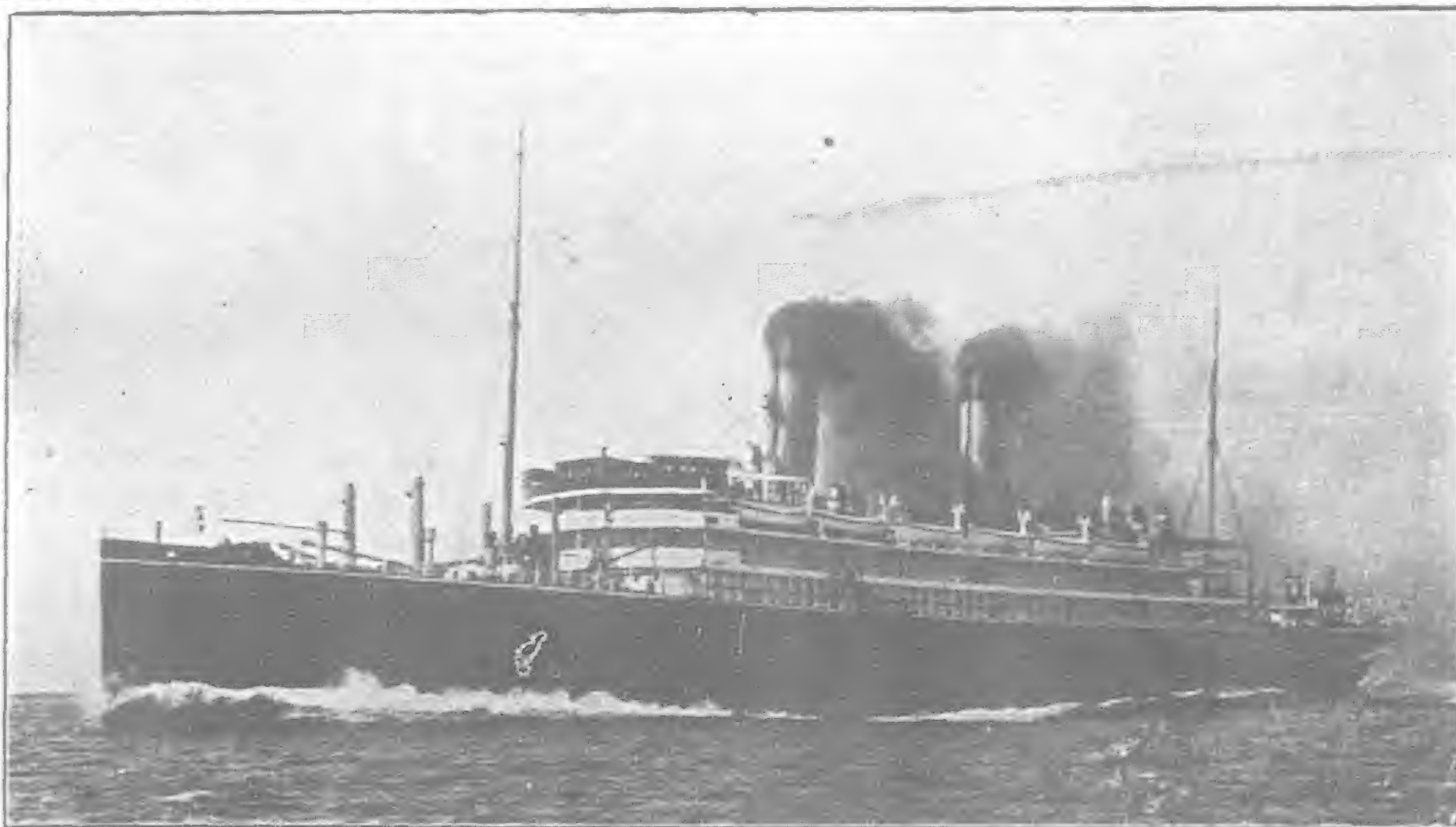
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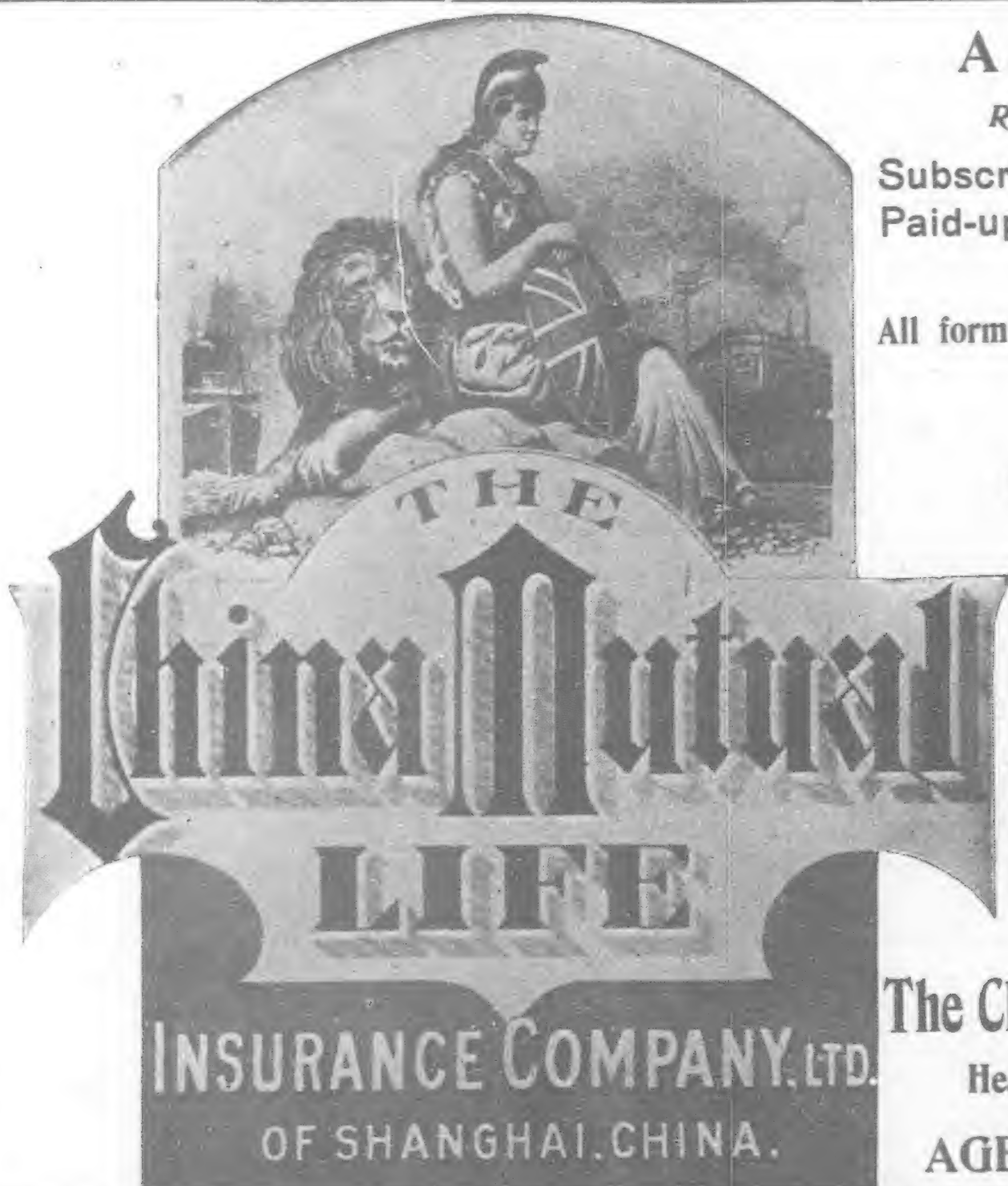
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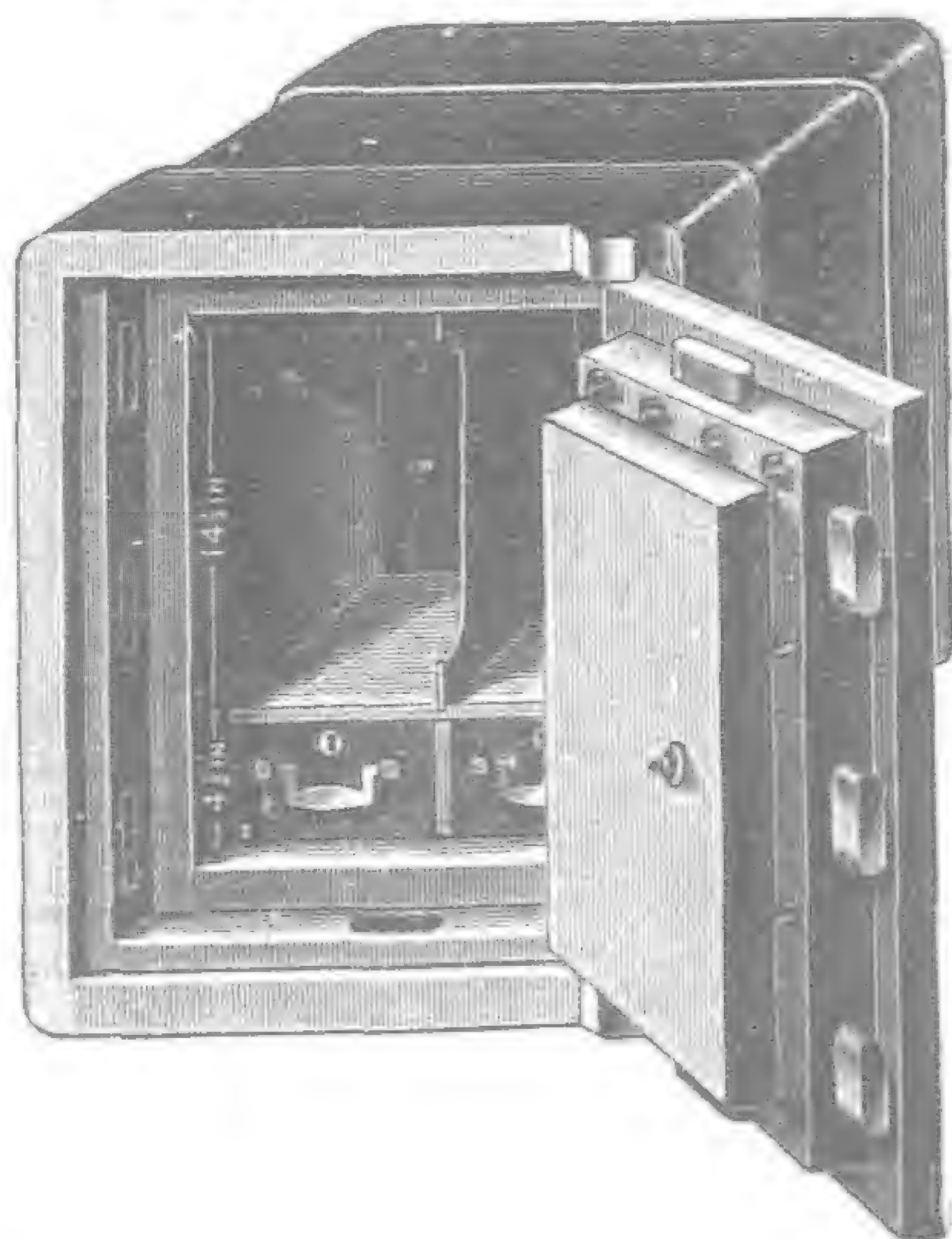
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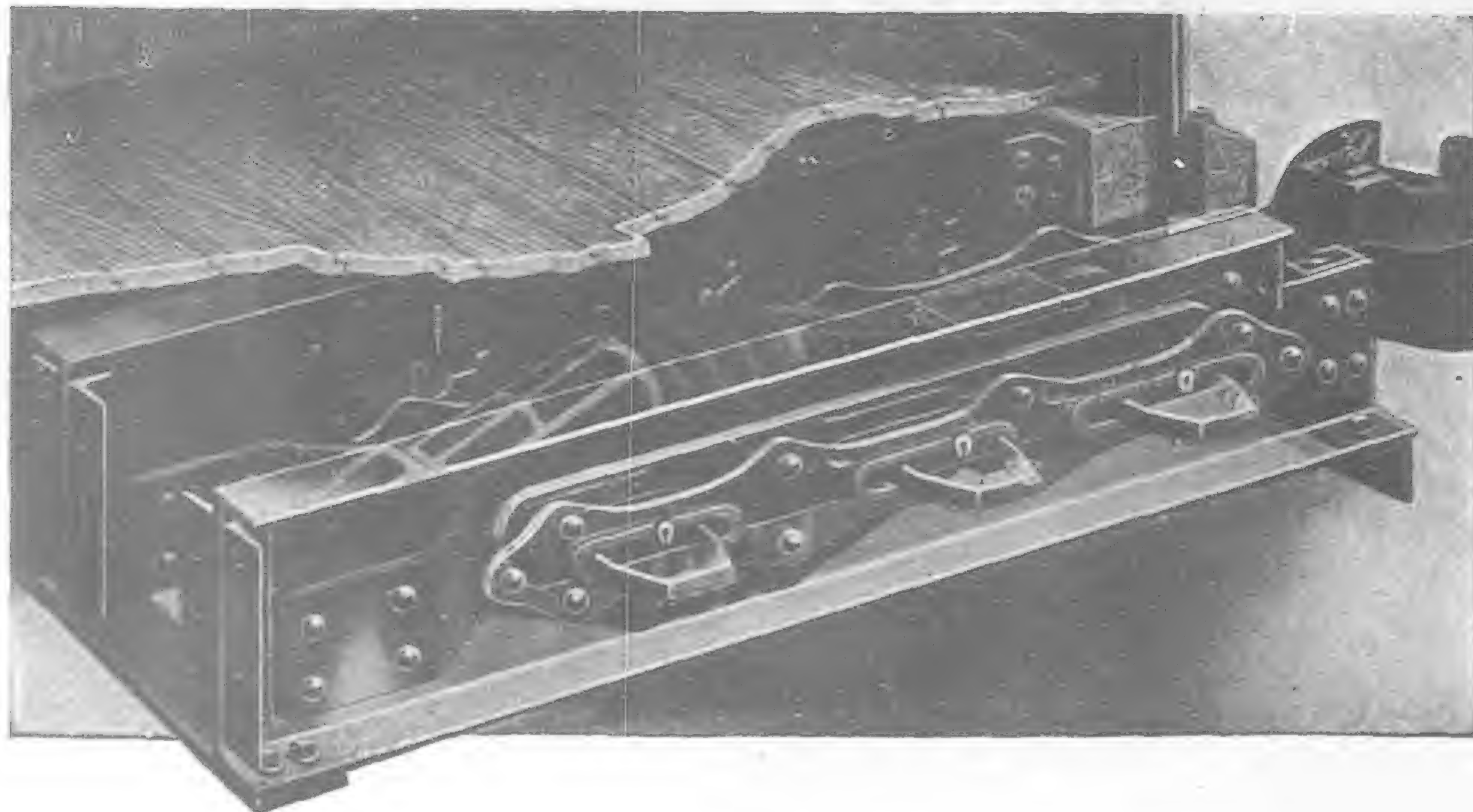
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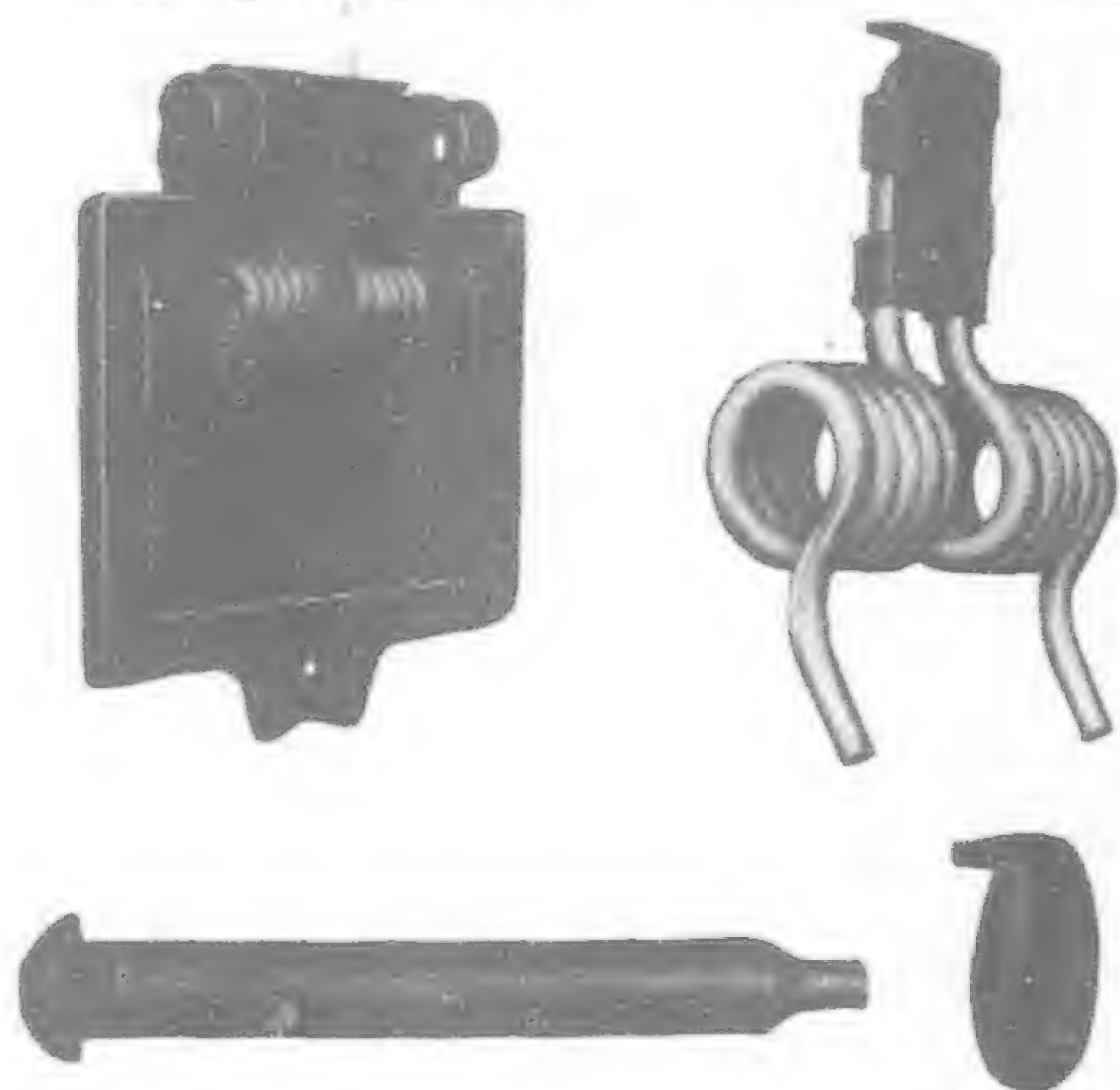
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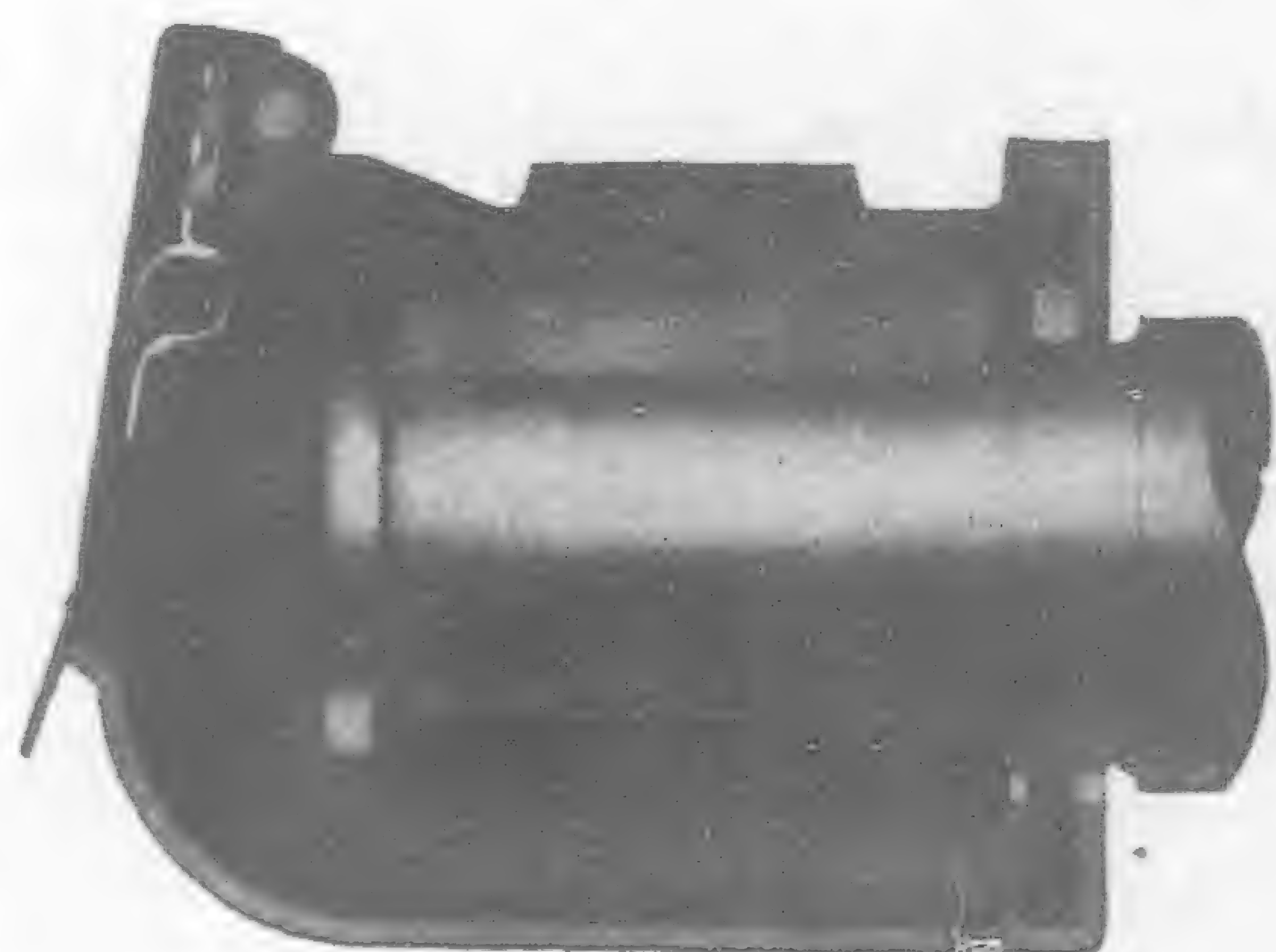


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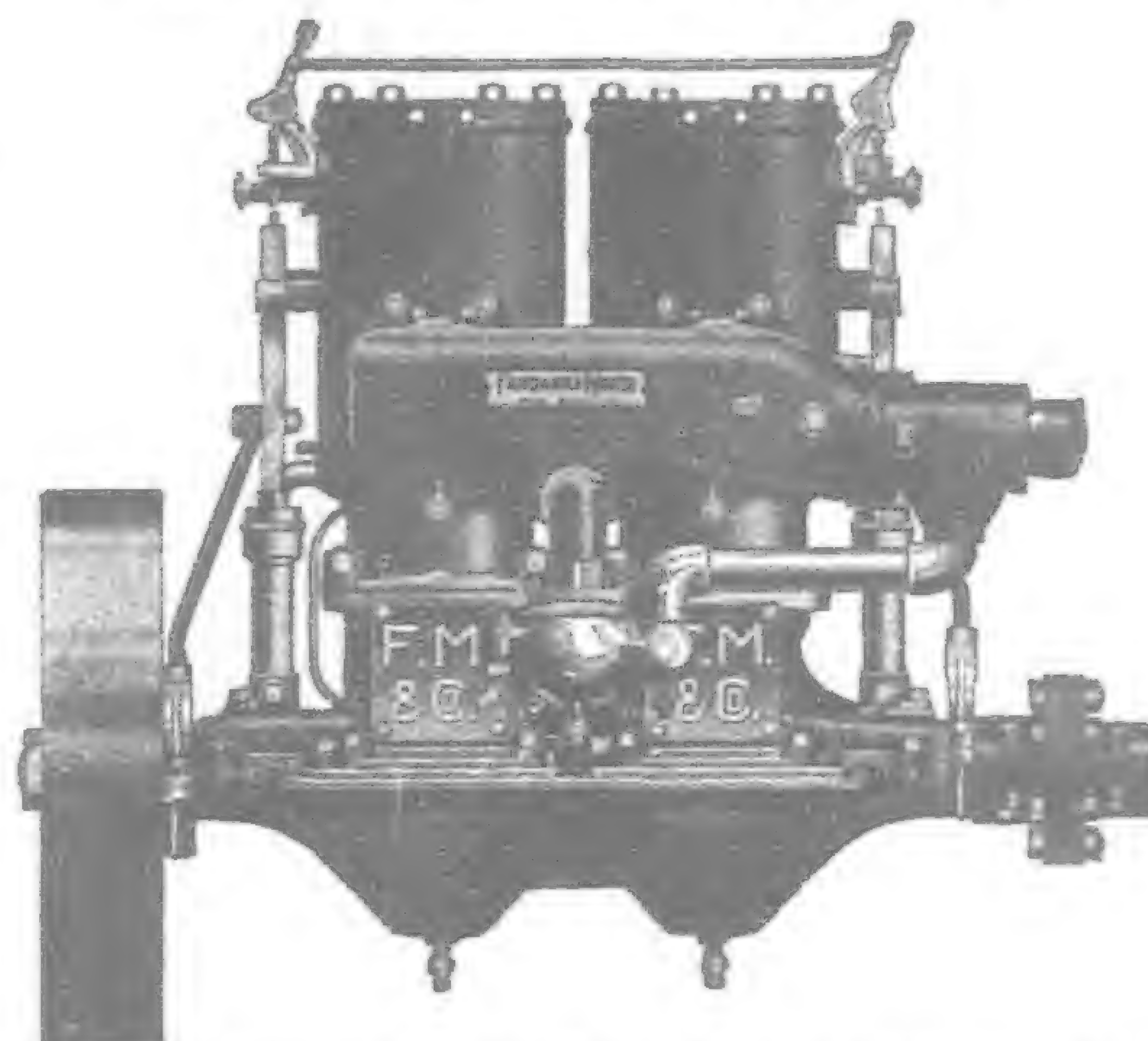
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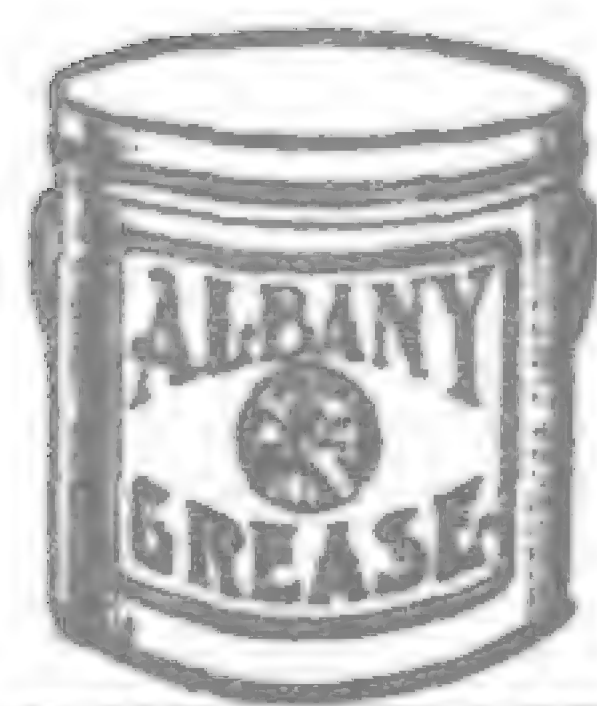
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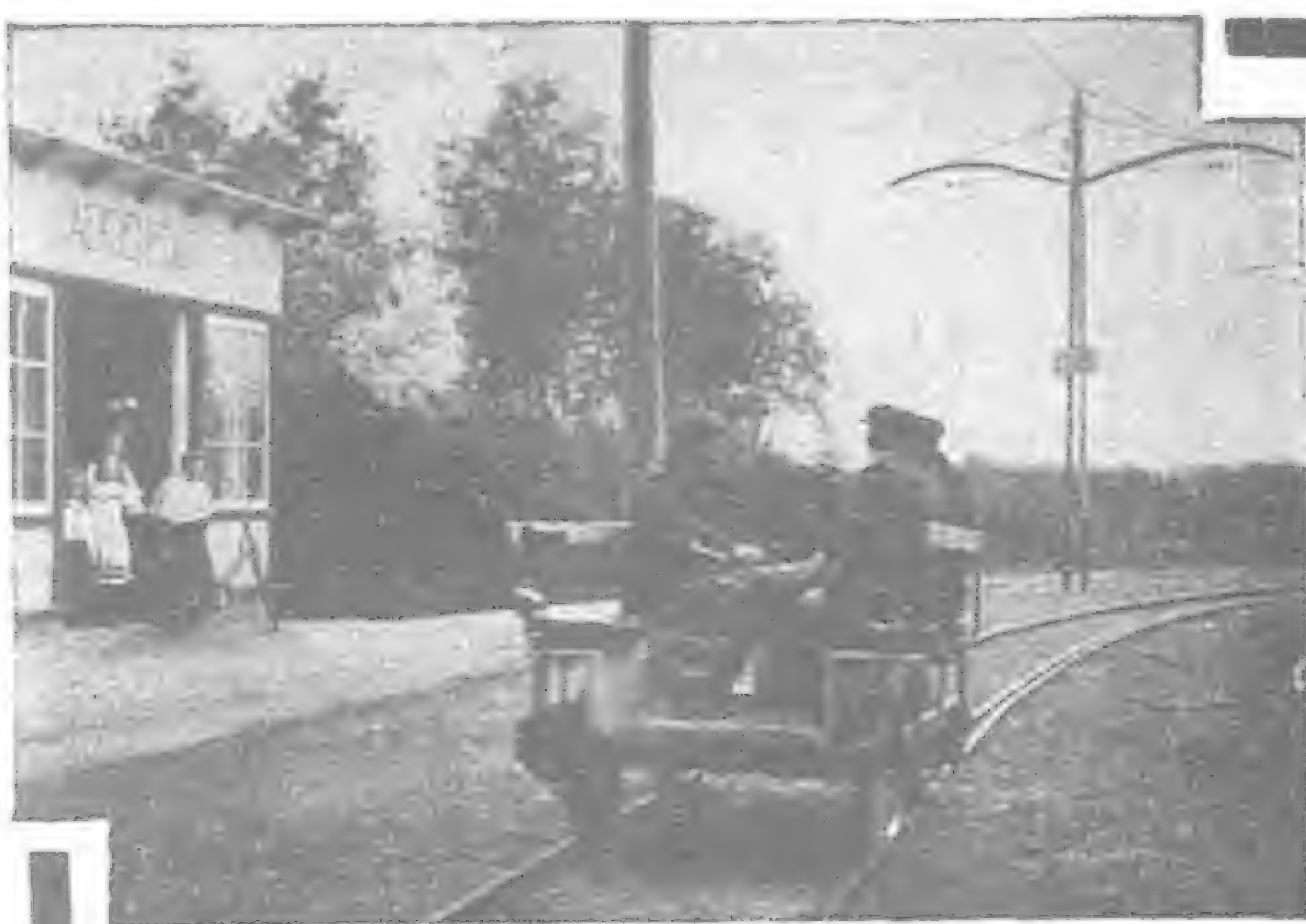
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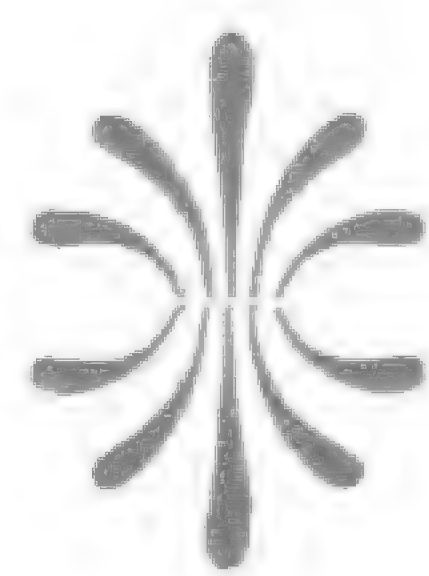
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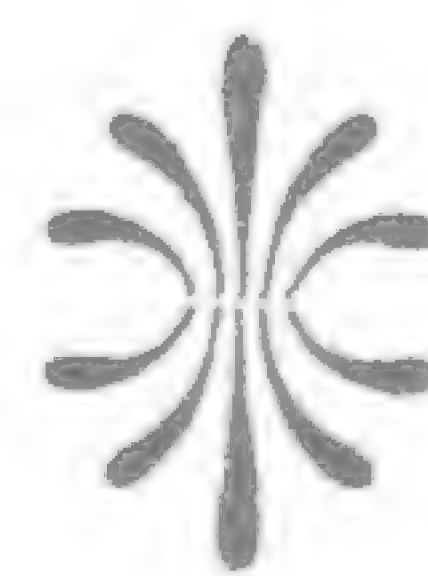
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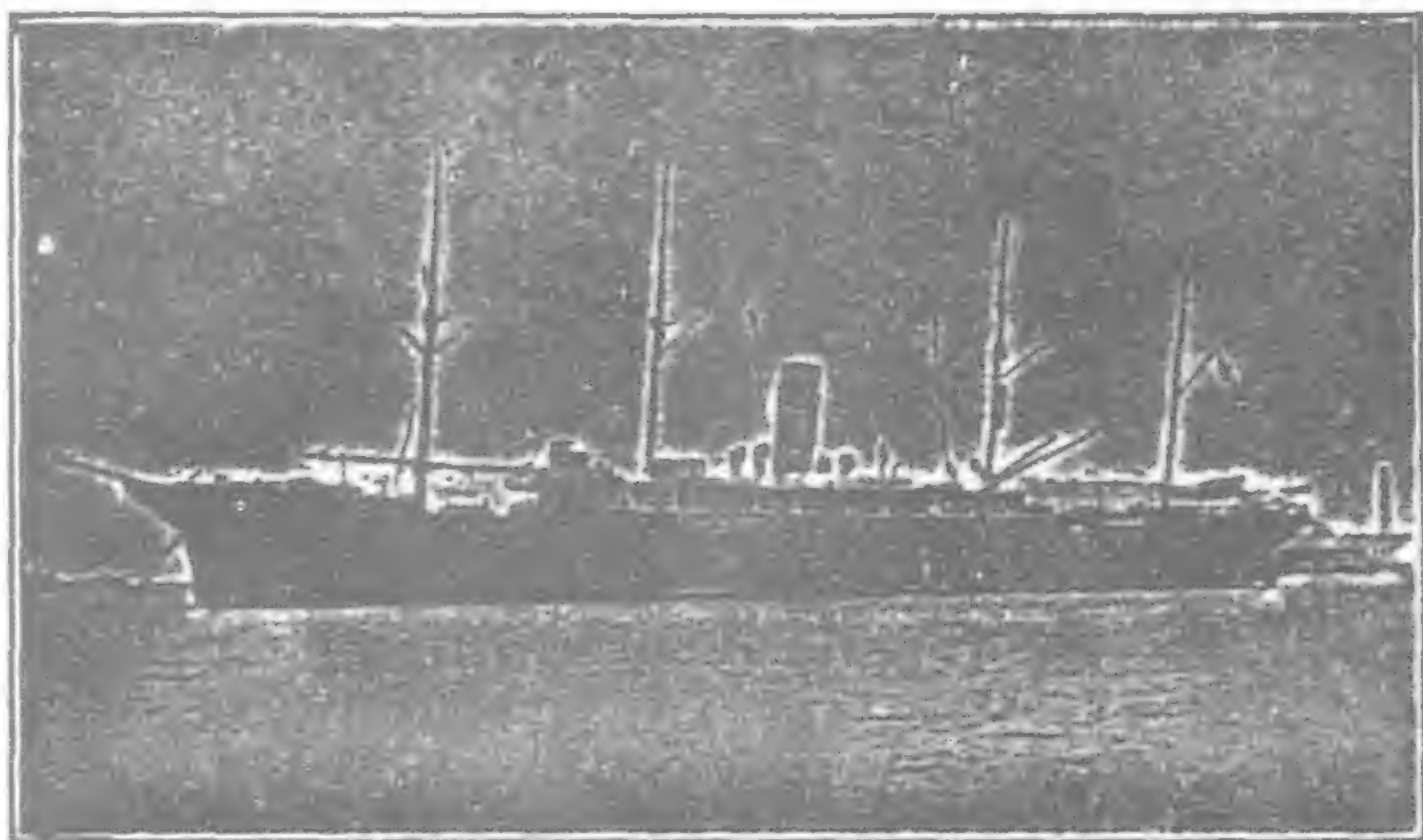
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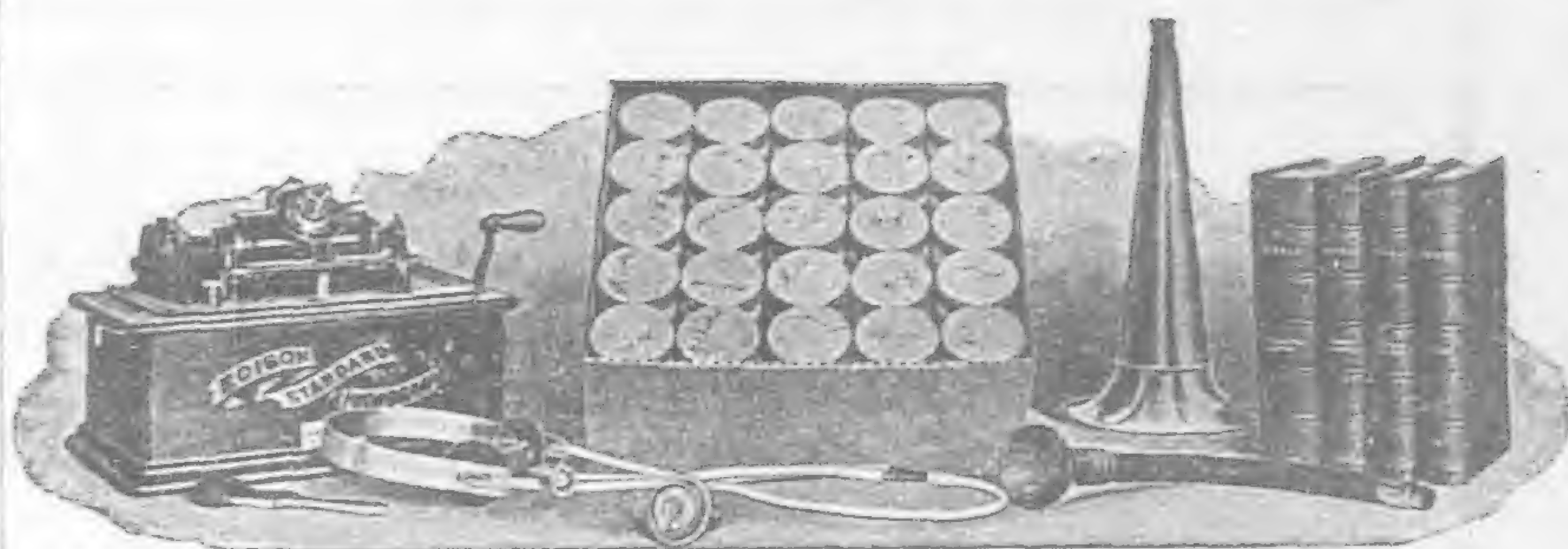
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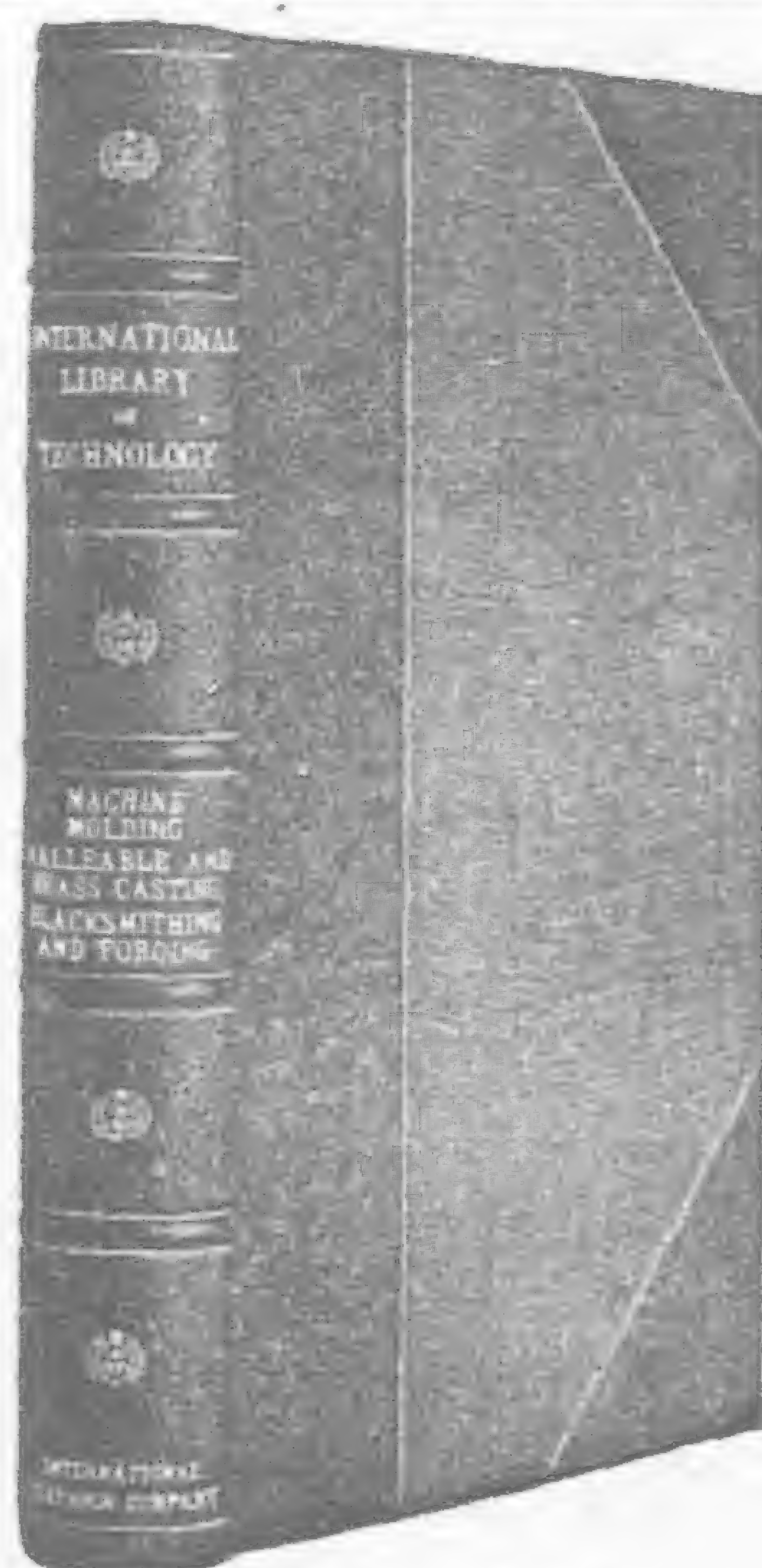
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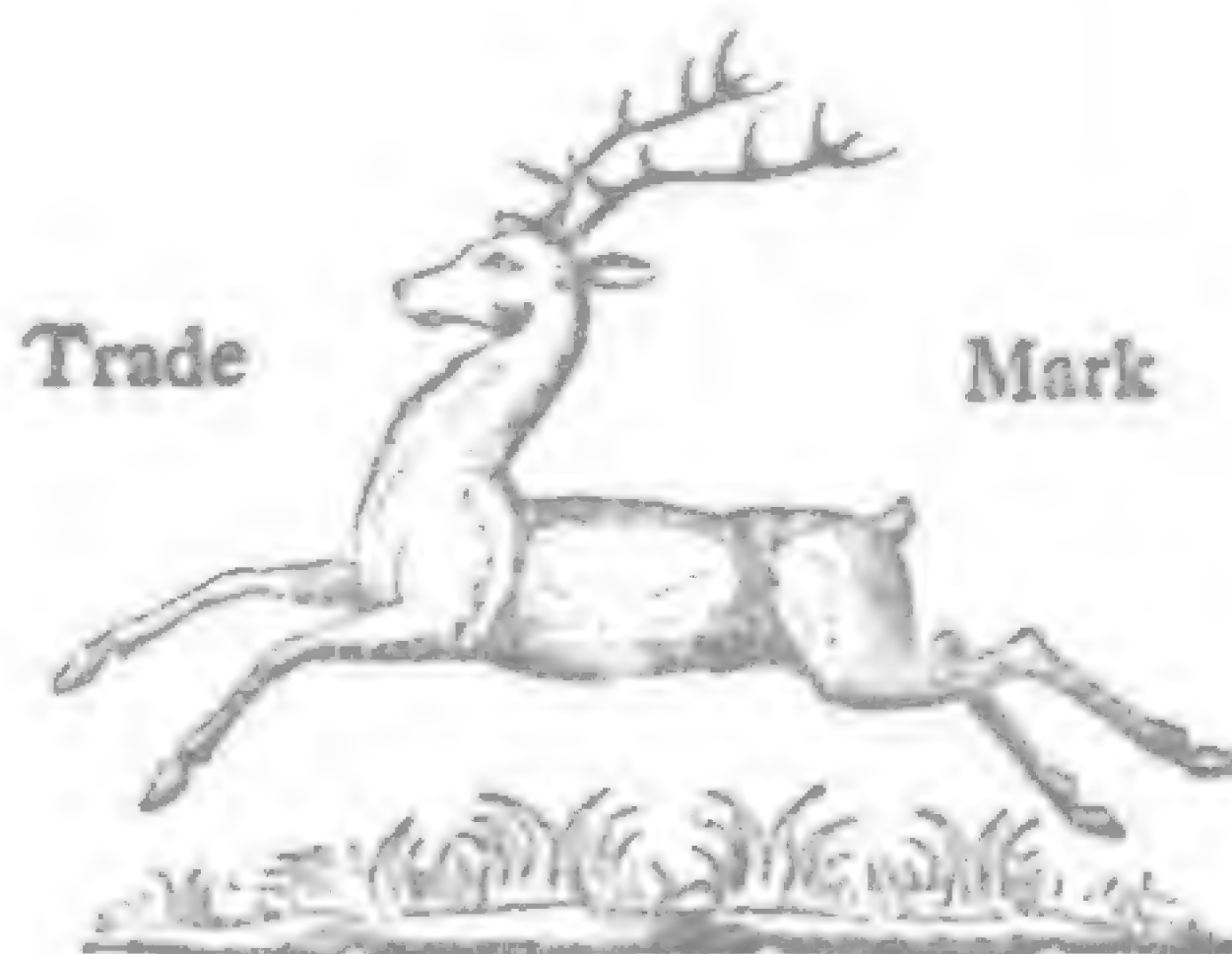
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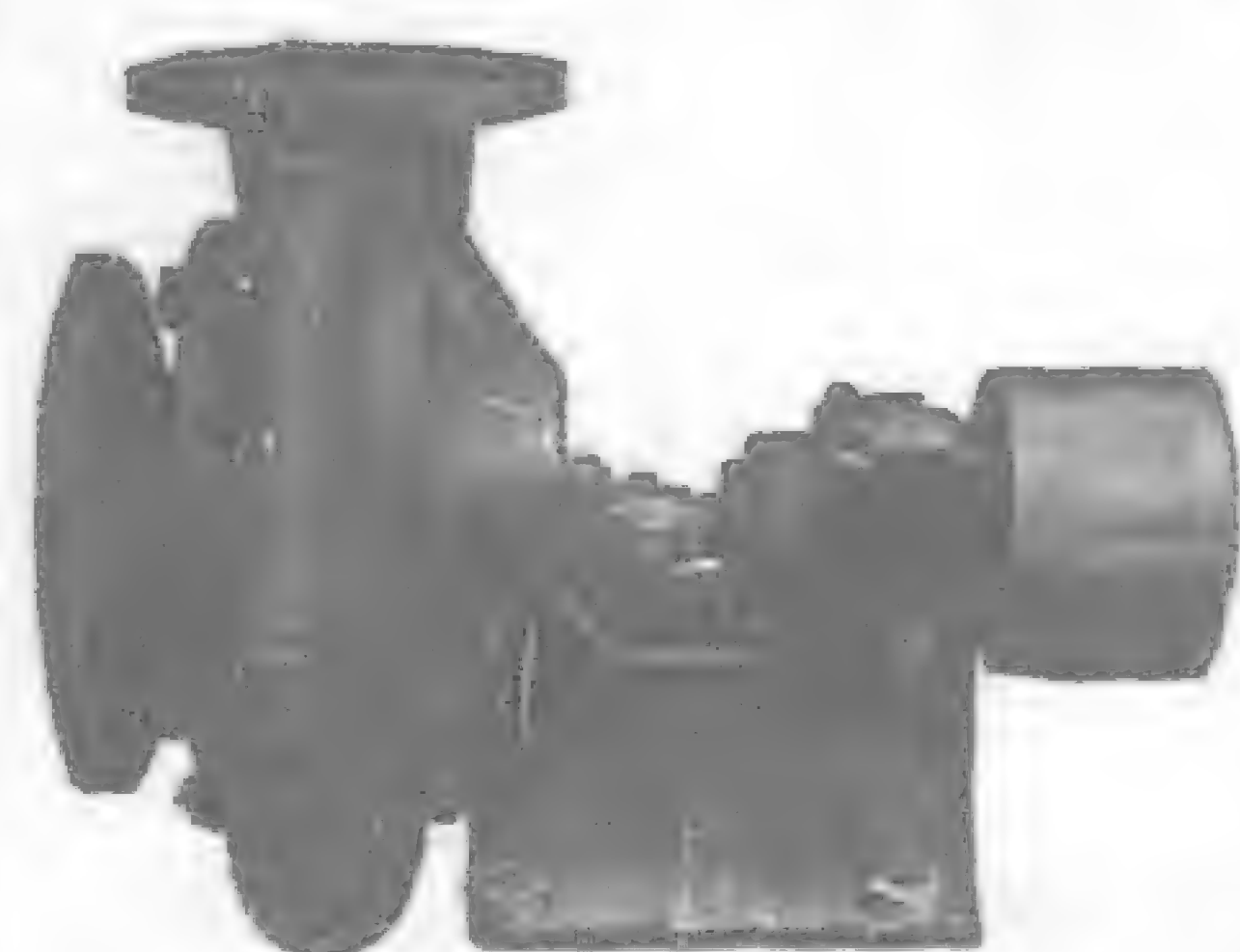
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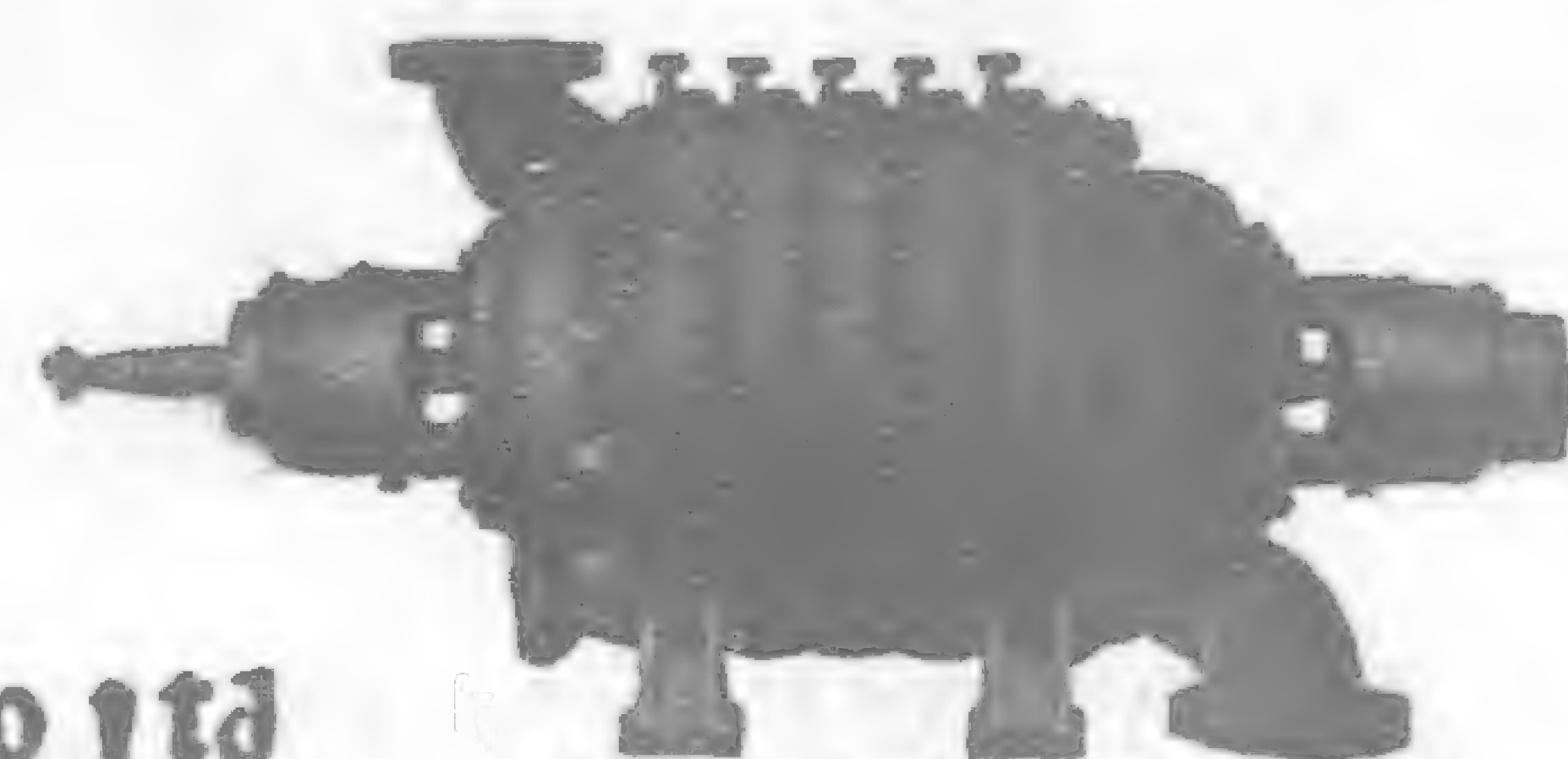
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Vol. X.

SHANGHAI AND MANILA, JANUARY 1914

No. 8

NATIONAL IRRIGATION AND CONSERVATION IN CHINA

THE MARVELLOUS CANALS OF THE COUNTRY

Just before Christmas, 1913, the Chinese Premier, Mr. Hsiung Hsih-ling; the Minister of the Interior, Mr. Chu Chi-chien; and the Minister of Commerce and Agriculture, Mr. Chang Chien, jointly memorialised the President, His Excellency Yuan Shih-kai, to establish a National Irrigation and Water Conservation Bureau with the object of properly investigating and dealing with the irrigation and conservation problems that are constantly confronting the Government, and which to date have not received the attention they deserve owing to the absence of a special bureau for the purpose. The President was so impressed with the arguments of the memorialists that within three days he issued a mandate creating the bureau, and appoint-

ing Mr. Chang Chien, the Minister of Commerce and Agriculture, to preside over it. This is a step which will be welcomed by all who have knowledge of the tremendous losses periodically suffered by millions of Chinese living in low-lying areas, and the great death rate and intense suffering which result from famines supervening upon floods.

1911, to estimate the cost of flood prevention measures, and to negotiate for the necessary capital with the object of commencing work without delay.

Suffering and loss of life and property was not confined to the region of the Hwai River, however. It existed in many widely separated sections of the country, and with the object of giving the whole subject adequate attention, and preventing the charge that partiality was shown to the unfortunates in the Hwai district, the supplicants urged that a National Bureau be established.

In their opinion the concentration of energies would result in great benefits to the millions of people populating the areas

affected by flood or drought, and since the Hwai River area called loudest for attention it could be given first consideration, and while that work was proceeding preliminary steps could be taken in other places.

THE PRESIDENT'S MANDATE

In his mandate of December 27, 1913, giving effect to the memorial of



Repairing a Breach in Dyke of Yellow River

MEMORIAL FOR A NATIONAL BUREAU

The memorialists dilated upon the extraordinary and marvellous undertakings of ancient rulers in China to preserve the low lands from the ravages of flood, to make the arid wastes productive by scientific irrigation, and to open communication with distant parts by the construction of elaborate canals, and emphasised the neglect which had in recent generations almost nullified the magnificent foundations laid by the wise rulers of the old time. To impress upon the President the immediate need of special attention being given to these problems the tremendous losses suffered in recent years in what is known as the Hwai River famine districts were cited. Chang Chien was appointed General Director of the Drainage Work of the Hwai River in 1912, they pointed out, and his special instructions from the Government were to continue the surveying work commenced in

the three Cabinet Ministers the President spoke of the great benefits accruing from irrigation, and went on:—"The lands along the big lakes and rivers are the most productive, but owing to lack of irrigation one sees the best lying in waste. Other tracts, either on the coast or along the rivers, are also wasted, some because the beds of the rivers heighten, others through the inundation of water from the sea. Great dangers are imminent while no preventive measure is taken, thus great benefits are in store which cannot be taken advantage of. Though works of a palliative nature are resorted to now and again nothing is done for lasting good. By comparing the work of irrigation which was done in the past with that of the Chow Dynasty, and with what is now being done in foreign countries, it becomes evident how enormous is the waste in this country. The evil is due partly to the corruption of the officials and ignorance of the people, but is mainly due to local cliquism which hinders and hampers all good works in that direction. During

the reign of Kan Hsi, Jen Fu, in a memorial to the Throne, suggested the means of increasing revenue, but in spite of the diligence of the Emperor, the effort to increase the wealth of the people by improving the land was left incomplete.

"Now that the form of government is changed the acts of the local bad characters possessing influence cannot be tolerated. The population of our country is large and increasing, and the means of subsistence is getting more and more difficult to obtain. Consequently idle people collect together to create trouble. We must therefore adopt the work of irrigation on an extensive scale and select good officials to impress upon the people the importance of agriculture in order that they may be employed, content-



Lock on the Grand Canal at Tsining

ed, and enabled to practice economy. During my retirement at Yuan Shan as a farmer, I facilitated the waterways, and the work done benefitted some thirty-two thousand mow of the surrounding land. It will be seen from this that the benefit irrigation will confer is very great.

"We have now established an Irrigation Bureau. The Director of the Bureau is hereby instructed to order the officers of the provinces to make surveys of the depths of the rivers as a preliminary to dredging, and dredging work should be undertaken first in the ports in order to facilitate the currents of the rivers. The work of irrigation in connexion with the large rivers will be undertaken by the Government, while those of the riverlets and lakes, etc., etc., should be taken up by local bodies to be formed for such purposes. By improving the waterways the farmers will be free from the fear of flood or famine, the agricultural products will increase, the wasted lands will decrease and the idle people will be employed. The prosperity of trade marts, ports and sea navigation are also dependent on the dredging of the mouths of rivers. So it is important that a careful investigation should be made into the matter. The Bureau is instructed to devise means and to report without delay."

CONSTITUTION OF THE BUREAU

In a mandate issued on January 8, the President set out the system under which the Bureau is to be governed. It is to be under the direct control of the Cabinet, and "shall manage the irrigation affairs of the whole country and the reclamation of waste lands along the banks of the rivers."

The staff is to consist of the Director-General (Mr. Chang Chien); an Assistant Director-General, whose duty it will be to assist in the general management and take the place of the Director-General when he is absent; two supervisors, whose duty it will be to supervise various works, and, if they be not sufficient others may be appointed; between two and six senior clerks who shall be employed in working out the details connected with the management of the Bureau; between eight and twelve clerks to assist the senior clerks; between two and six technical experts to manage all technical affairs; between ten and sixteen experts to assist the technical experts. The mandate, however, places in the hands of the chiefs of the Bureau the appointment of extra assistants under the heads mentioned should they be necessary, and "on account of the requirement of technical knowledge the

Irrigation Bureau for the whole country may employ advisers at its own discretion," and when branch offices are appointed chiefs may be appointed to manage them.

The above is as far as the mandate goes in connection with the establishment of the Central Bureau, and makes no stipulations as to where branch offices shall be opened. Mr. Chang Chien has, however, already considered this question, and so far has in mind the creation of thirteen branches in Chihli, Shantung, Hunan, Hupeh, Szechuan, Kiangsi, Anhui, Chekiang, Kiangsu, Fukien, Kuangtung and Kuangsi provinces.

The expenses connected with the maintenance of these bureaux will be met by the Provincial treasuries, while the funds for the upkeep of the Central Bureau at Peking will come from the Central Government. Capital for the carrying out of various flood prevention or irrigation schemes will be raised by foreign loans.

AMERICAN ENGINEER-IN-CHIEF PROBABLE.

A point of considerable interest to foreigners in this connection is the probable nature of the engineering staff. At present Mr. Chang Chien has in mind the selection of a thoroughly competent foreign engineer as Engineer-in-chief, and in all probability assistant foreign engineers will be appointed, with staffs of Chinese engineers to undertake any special schemes that may be embarked upon. The Director-General of the Bureau contemplates appointing a prominent American engineer as Engineer-in-chief, but so far no selection has been made. One of the chief reasons why an American stands the best opportunity of selection for this important position is the feeling on the part of the Chinese Government that some sign of gratitude is due America for the immense amount of money, of food, of clothing and of human endeavor which the American people have from time to time contributed in the famine regions to ameliorate the terrible lot of the hunger and fever-stricken natives. American people have done more than any others in this direction, and that fact, combined with the one that the American Red Cross Society, at



A Completed Dyke

its own expense, despatched Mr. C. D. Jameson, an engineer, to the Hwai River famine regions to investigate and report on the best means of preventing further floods and consequent famine, weighs considerably with the Chinese Government in deciding to which country to give the honor of an engineer for one of the most important works in China. A further consideration, and an important one, is that there are engineers in America with great experience in this kind of work.

THE HWAI RIVER SCHEME

When Mr. Jameson concluded his survey* on behalf of the Red Cross Society he estimated that work costing some \$35,000,-

* The full report by Mr. C. D. Jameson was published in the November, 1912, issue of the FAR EASTERN REVIEW.

000, Mexican currency, would be required adequately to protect the region affected by the floods of the Hwai River alone. That amount of money would, however, render 17,000 square miles immune from abnormal floods by draining the area and lowering the flood level to such an extent that in all but abnormal years two crops would be possible each year, where, under present conditions, two crops in five years is the rule. In addition to this improvement in land which is now supposed to be under cultivation there would also be reclaimed some 6,000,000 Chinese *mou* of land which is now absolutely valueless, being covered by shallow lakes and swamps. There would also be a saving of the cost of the annual famine relief which for many years has been poured by millions and millions of dollars into this section of China. The moral results would be the elimination of the suffering, starvation and degeneration of several millions of people who now are fast becoming beggars and robbers; the turning into producers of these millions who are now not only non-producers, but who are becoming a menace to the country and causes of unrest and lawlessness.

So important is this Hwai River scheme that it will be the first to be dealt with by the new Bureau. Mr. Chang Chien has in the past personally devoted much attention to it, and has been the director of much effort to acquire a knowledge of conditions and to devise a plan whereby the maximum of good may be secured.

The map which accompanies this article was drawn by Mr. Jameson for the purpose of illustrating the affected region, and it will be instructive as showing the vast areas which are now at the mercy of the elements and which, by sustained and intelligent employment of modern contrivances and wide experience, might be preserved for the use of peoples annually despoiled of means of existence through no fault of their own.

In the past huge sums have been granted by the Central Government for flood preventive measures, but as stated by the President, corruption has diverted the bulk of the funds from their proper use. It is trusted that the newly established Bureau will bring about a marked change in this respect, and will, by up-to-date methods, conquer the giants which have hitherto scourged the people and which, in the past, have been used as a pretext by officials for amassing large amounts of money for their personal use.

"CHINA'S SORROW."

While the treatment of the Hwai River region will employ a great sum of money and considerable energy, there are many other sections of China almost equally bad, and which call for extensive effort. That great scourge, the Yellow River, known variously as "China's Sorrow," "The Ungovernable," and "The Scourge of the Sons of Han," is a constant menace to millions of people and hundreds of thousands of square miles of territory. In what might be called its lower course, through Honan and Shantung, it constantly threatens to overflow the artificial banks which contain its turbid waters and which hold its bed many yards above the surrounding plains. As month after month passes the mud and sand which the river carries with it continually raise the bed, and the patient Chinese whose lives and property depend upon constant care are compelled continuously to heighten the embankments and plan, by building outlying dykes, to prevent a great inundation if the immediate embankments are broken by flood.

The speciality of this river is to change its course. Frequently it has run to the north or to the south of the Shantung

mountains, flowing in turn either into the Gulf of Chihli or into the Yellow Sea. Its last serious deviation took place in 1851, when the dykes near Kaifeng gave way and the great stream wandered away north as a change from its previous southerly direction. In 1887 it caused loss of life to millions of people by bursting its banks, and in 1898, 1,500 villages to the north-east of Tsinanfu, the capital of Shantung province, experienced its ravages, while a larger region to the south-east of the same city was devastated.

Mainly the river seems to be running on a self-created elevated ridge, and at any time its past performances may be repeated. To prevent this the Central Government has a great task ahead of it, and a great duty. When the breach in the region of Tsinanfu occurred over 100 square miles of territory were converted into a sandy waste of almost absolute sterility, while over an area of some 200 miles a deposit of more or less sterility was laid. Captain W. F. Tyler, of the Maritime Customs, who wrote a report on this inundation, estimates that an average depth of sand of three feet was deposited over 200 square miles, and at the places where examination was possible it ranged from six to ten feet. Taking an average of five feet the river discharged at this time 28,000,000,000 cubic feet of silt. Captain Tyler calculates that the sediment borne by this river is incomparably greater than

in any other river in the world. River officers say that in floods the fluid mass is from 50 to 70 per cent. solid matter and has the consistency of oil! The sand and mud is not a mere sediment left by subsiding waters; it is a vast stream of liquid mud poured from the river bed.

Annually this condition of things goes on, and increases the terrors impending over the regions traversed by this river. The amount of silt brought down is on the increase; the flood volume is on the increase, and the low-river volume is on the decrease. As the river bed rises so does the quantity of water which exfiltrates increase, and the ability of the river to carry its load of silt to the sea becomes less and less.

A TASK FOR THE BUREAU

The question of silt is the dominant factor in the Yellow River problem, and the first and most obvious remedial scheme would be to try and make the water carry the silt down to the sea—to straighten the bends by training work and to bring the low and high river channels to sections best adapted to the volumes. Another scheme is to take steps in the upper part of the river, in Honan, Shansi, and Shensi, to mitigate the erosion of the river banks and that of its tributaries, and, by afforestation, to ameliorate the torrents and cause a more regular flow from the now denuded uplands. Such a work is of such immense magnitude, and as regards afforestation, would take so many years to have any appreciable effect, that Captain Tyler thinks it outside the limits of a scheme for the control of the Yellow River within the lifetime of the present generation.

But to find some way to overcome the dangers with which this great river is constantly menacing large sections of China is one of the tasks which will come under the Bureau now formed, and before very many years are over it is a task which the Government will have seriously to tackle. The temporary efforts made by provincial authorities to control the river are estimated to cost in the vicinity of three and a half million taels, and result in no guaranteed safeguarding of life and property, while the annual destruction of property by the river may be placed at about one and a half million taels. These are the figures used by Captain Tyler, but they do not take into



A Grand Canal Lock. The grooves in which the timber baulks are placed to raise the water are here well shown.

account an abnormal flood which at any time may burst the great dykes, though he significantly states that the three and a half million taels properly handled might suffice to prevent any great disaster.

The warmest praise must be given the Chinese engineers who have had in their hands the business of looking after the frolics of this great river, and the illustration in this issue showing the closing of a breach in the dyke at Liu-wang-chuang in September, 1902, is highly instructive. Captain Tyler, in describing this particular piece of work, says that some 1,500 yards of the dyke were washed away and the greater part of the water flowed through the breach. The closing was effected



Grand Canal at Tsining in Shantung

in the following manner: a dam was run out from either side of the breach by the successive building of pakwerks—layers of kaoliang (giant millet) stalk and earth. When these approached within 55 feet of each other a huge deflecting groyne of pakwerk was built on to the up-river dam to minimise the rush of water through the aperture. The width of the channel abreast of the breach had been about 600 feet, but this was reduced to less than 300 feet by the formation of a sandbank growing out from the opposite shore. When the entrance had been constricted to 55 feet, ropes were stretched across and belayed to anchor-piles. Over 100 eight-inch ropes were used, spaced close together. On these were then placed, in alternate layers, kaoliang stalks and sacks of clay. When these materials were up to the level of the dam, the ropes were manned, and at a given signal, were each lowered one foot on each side. The mattress thus formed was again added to with kaoliang and clay and again lowered, and so on till the breach was closed. The deflecting groyne used to minimise the rush of water is described as a remarkable structure, projecting 120 feet into the full strength of the current and tied up to the kaoliang dam by an immense number of eight-inch hawsers.

OTHER FLOOD REGIONS—AND FUNDS

In addition to the Hwai River and the Yellow River menaces the new Bureau will also have to take care of many other regions where floods continually deprive the inhabitants of their property and livelihood, and the silting waterway obstruct communication. An important district is that of north Chihli, where annual floods devastate large tracts. There are others in various provinces, and if the Bureau but deals with a tithe of the work of this kind which should be done it will have its hands full and will have more than sufficient to absorb the funds that can be supplied for the purpose by the Government or the provinces. To cope with the Hwai River scheme, in fact, foreign money will be needed, and the proposal now being considered is whether a sum of \$20,000,000 United States currency can be raised in America as a loan for the purpose. The feeling here is that it would be difficult to float such a loan, but as the Red Cross Society have taken a lively interest in the subject it is probable that they might be able to engineer a loan upon a semi-philanthropic basis, putting charity on a business footing as it were. The loan would be

secured upon the reclaimed land, and the land taxes or some other form of revenue, would be set aside to pay the interest and repay the principal. At this writing the whole question is being considered, but the establishment of the Bureau brings it on apace. It should not be long before a decision is arrived at, and if Belgian offers are not too attractive to the Chinese, or if the Chinese have not forgotten the gratitude they owe America for relief to their suffering millions in the past, American philanthropists or capitalists, or both, will be asked to provide the necessary loan.

While the extensive flood areas are receiving consideration the Bureau will be compelled to give considerable attention to the great canal system of the country, a system which was once the glory of the designers, and, of immense advantage to the inhabitants, but which is now a standing monument to the neglect of recent rulers of the country. The Grand Canal, one of the wonders of the world, has silted so as to be unnavigable in parts, and hundreds of miles of canals in other localities may be navigated only when there are floods. The great importance of these canals for transport should compel attention to them, and while the dredging work is monumental it should be easy of rapid accomplishment by the employment of modern dredgers to assist the manual labor that may be employed in places to advantage.

The Wonderful Canals of China

The great extent of these canals—almost all of which require dredging or attention in other ways—is only realisable by a study of maps and accumulated data. Something of this kind was prepared by the late professor F. H. King, and his observations are here given as an important contribution to the literature on the subject. Professor King, in his book "Farmers of Forty Centuries," published privately after his death by Mrs. King, at Madiscn, Wisconsin (450 pages and 250



Working a Lock. This view illustrates the methods adopted to haul a Junk through a lock. Wire ropes are attached to the Junk and are wound on windlasses by the country people.

illustrations, \$2.50 U. S. currency) dealt at considerable length with the canal system of China and other countries in the Far East, and much of what he had to say was reproduced in the "National Geographic Magazine," of Washington, from which we take the following:

It is well nigh impossible by word or map to convey an adequate idea of the magnitude of the systems of canalization, delta, and other lowland reclamation work, or of the extent of surface fitting of fields which have been effected in China, Korea, and Japan through the many centuries and which are still in progress. The lands so reclaimed and fitted constitute their most enduring asset and they support their densest populations.

Forty canals across the United States from east to west and sixty from north to south would not equal in number of miles those in these three countries to-day. Indeed, it is probable that this estimate is not too large for China alone.

In one of our journeys by house-boat on the delta canals between Shanghai and Hangchau, in China, over a distance of 117 miles, we made a careful record of the number and dimensions of lateral canals entering and leaving the main one along which our boat-train was traveling. This record shows that in 62 miles, beginning north of Kia-hsing and extending south to Hangchau, there entered from the west 134 and there left on the coast side 190 canals. The average width of these canals, measured along the water line, we estimated at 22 and 19 feet, respectively, on the two sides. The height of the fields above the water level ranged from 4 to 12 feet during the April and May stage of water.

The depth of water after we entered the Grand Canal often exceeded 6 feet, and our best judgment would place the average depth of all canals in this part of China at more than 8 feet below the level of the fields.

On map No. 1 representing the area of 718 square miles in the region traversed, all lines shown are canals, but scarcely more than one-third of those present are shown on the map. Between A, where we began our records before reaching Kia-hsing, and B, near the left margin of the map, there were 43 canals leading in from the up-country side instead of the eight shown, and on the coast side there were 86 leading out into the delta plain toward the coast, whereas but 12 are shown.

Again, on one of our trips by rail from Shanghai to Nanking we made a similar record of the number of canals seen from the train close along the track, and the notes show an occurrence of 593 canals in a distance of 162 miles, an average of more than three canals per mile for this region and that between Shanghai and Hangchau.

The extent, nature, and purpose of these vast systems of internal improvement may be better realized through a study of the next two sketch maps. The first (map No. 2) represents an area 175 by 160 miles, of which map No. 1 is the portion enclosed in the small rectangle. On this area there are shown 2,700 miles of main canals, but from our personal observations it is probable that there exists to-day in the area not less than 25,000 miles of canals.

THE FAR-REACHING TIDES

In the next illustration (map No. 3) an area of northeast China 600 by 725 miles is represented. The unshaded land area covers nearly 200,000 square miles of alluvial plain. This plain is so level that at Ichang, nearly 1,000 miles up the Yangtse, the elevation is only 130 feet above the sea. The tide is felt on the river to beyond Wuhu, 375 miles from the coast. During the summer the depth of water in the Yangtse is sufficient to permit ocean vessels drawing 25 feet of water to ascend 600 miles to Hankau, and for smaller steamers to go on to Ichang, 400 miles further.

The location in this vast low delta and coastal plain of the system of canals already described is indicated by the two rectangles in the southeast corner of the sketch map 3. The heavy barred black line, extending from Hangchau in the south to Tientsin in the north, represents the Grand Canal, which has a length of more than 800 miles. The plain to the east of this canal, as far north as the mouth of the Hwang-ho in 1852, is canalized much as in the area shown in map No. 2. So, too, is a large area both sides of the present mouth of the same river in Shantung and Chi-li between the canal and the coast.

Westward, up the Yangtse Valley, the provinces of Nganhwei, Kiangsi, Hunan, and Hupeh have very extensive canalized tracts, probably exceeding 28,000 square miles in area. Still further west, in Szechuan province, is the Chengtu plain, 30 by 70 miles, with what has been called "the most remarkable irrigation system in China."

A conservative estimate would place the miles of canals and leveed rivers in China, Korea, and Japan equal to eight times the number represented on map No. 2—fully 200,000 miles in all.

THE GREAT LEVEES

As adjuncts to these vast canalization works there have been enormous amounts of embankment, dike, and levee construction. More than 300 miles of sea wall alone exist in the area covered by the sketch map No. 2. The east bank of the Grand Canal about Yangchau is itself a great levee, holding back the waters to the west above the eastern plain, diverting them south into the Yangtsekiang; but it is also provided with spillways for use in times of excessive flood, permitting waters to discharge eastward. Such excess waters, however, are controlled by another dike, with canal along its west side, some 40 miles to the east, impounding the water in a series of large lakes until it may gradually drain away. This area is seen in map No. 3 north of the Yangtse River.

Along the banks of the Yangtse, and for many miles along the Hwang-ho, great levees have been built, sometimes in reinforcing series of two or three at different distances back from the channel, where the stream bed is above the adjacent country, in order to prevent widespread disaster and to limit the inundated areas in time of unusual flood. In the province of Hupeh, where the Han River flows through 200 miles of low country, this stream is diked on both sides throughout the whole distance, and in a portion of its course the height of the levees reaches 30 feet or more.

Again, in the Canton Delta region there are other hundreds

of miles of sea wall and dikes, so that the aggregate mileage of this type of construction works in the Empire can only be measured in thousands of miles.

In addition to the canal and levee construction works, there are numerous impounding reservoirs to control overflow waters from the great streams. Some of the interior reservoirs have areas of 2,000 and 1,800 square miles, and during the heaviest rainy seasons each may rise through 20 to 30 feet. Then there are other large and small lakes in the coastal plain, giving an aggregate reservoir area exceeding 13,000 square miles, all of which are brought into service in controlling flood waters, all of which are steadily filling with the sediments brought from the far-away, uncultivable mountain slopes and which are ultimately destined to become rich alluvial plains, doubtless to be canalized in the manner we have seen.

NEW LAND IN THE MAKING

There is still another phase of these vast construction works which has been of the greatest moment in increasing the maintenance capacity of the Empire—the wresting from the flood waters of the enormous volumes of silt which they carry, depositing it over the flooded areas, in the canals, and along the shores in such manner as to add to the habitable and cultivable land. Reference may be made to the rapid growth of Chungming Island, in the mouth of the Yangtsekiang, and the million people now finding homes on the 270 square miles of newly made land which now has its canals, as may be seen in the upper margin of map No. 2.

The city of Shanghai, as its name signifies, stood originally on the seashore, which has now grown 20 miles to the northward



Lock on Grand Canal at Tsining



Map No. 1.—Map of Main Canals in 718 square miles of Chekiang province. Each line represents a canal, but scarcely more than one third of those present are shown on the map.

and to the eastward. In 220 B.C. the town of Putai, in Shantung, stood one-third of a mile from the sea, but in 1730 it was 47 miles inland, and is 48 miles from the shore to-day.

The dotted line laid in from the coast of the Gulf of Chihli on map No. 3 marks one historic shore line and indicates a general growth of land 18 miles to seaward.

Besides these actual extensions of the shore lines, the centuries of flooding of lakes and low-lying lands has so filled many depressions as to convert large areas of swamp into cultivated fields. Not only this, but the spreading of canal mud broadcast over the encircled fields has had two very important effects, namely, raising the level of the low-lying fields, giving them better drainage and so better physical condition, and adding new plant food in the form of virgin soil of the richest type, thus contributing to the maintenance of soil fertility, high maintenance capacity, and permanent agriculture through all the centuries.

AN ENGINEER-EMPEROR

These operations of maintenance and improvement had a very early inception; they appear to have persisted throughout the recorded history of the Empire and are in vogue to-day. Canals of the type illustrated on maps Nos. 1 and 2 have been

built between 1886 and 1901, both on the extensions of Chungming Island and the newly formed mainland to the north, as is shown by comparison of Stieler's atlas, revised in 1886, with the recent German survey.

Earlier than 2255 B.C., more than 4,100 years ago, Emperor Yao appointed "The Great" Yu "superintendent of works," and entrusted him with the work of draining off the waters of disastrous floods and canalizing the rivers, and he devoted 13 years to this work. This great engineer is said to have written several treatises on agriculture and drainage, and was finally called, much against his wishes, to serve as Emperor during the last seven years of his life.

The history of the Hwang-ho is one of disastrous floods and shifting of its course, which have occurred many times in the years since before the time of the Great Yu, who perhaps began the works perpetuated to-day.

Between 1300 A.D. and 1852 the Hwang-ho emptied into the Yellow Sea south of the highlands of Shantung, but in that year, when in unusual flood, it broke through the north levees and finally took its present course, emptying again into the Gulf of Chihli, some 300 miles further north. Some of these shiftings of course of the Hwang-ho and of the Yangtsekiang are indicated in dotted lines on the sketch map No. 3, where it may be seen that the Hwang-ho during 146 years poured its waters into the sea as far north as Tientsin, through the mouth of the Pei-ho, 400 miles to the northward of its mouth in 1852. This mighty river is said to carry at low stage past the city of Tsinan, in Shantung, no less than 4,000 cubic yards of water per second and three times this volume when running at flood. This is water sufficient to inundate 33 square miles of level country 10 feet deep in 24 hours.

CANAL BUILDERS FOR CENTURIES

What must be said of the mental status of a people who for 40 centuries have measured their strength against such a Titan racing past their homes above the level of their fields, confined only between walls of their own construction? While they have not always succeeded in controlling the river, they have never failed to try again. In 1877 this river broke its banks, inundating a vast area, bringing death to a million people. Again, as late as 1898, 1,500 villages to the northeast of Tsinan, and a much large area to the southwest of the same city, were devastated by it, and it is such events as these which have won for the river the names "China's Sorrow," "The Ungovernable," and "The Scourge of the Sons of Han."



Map No. 2.—Sketch map of portions of Chekiang and Kiangsu Provinces. Representing some 2,700 miles of main canals and over 300 miles of sea-wall. The sea-walls are represented by the very heavy black lines. The area shown in the map contains not less than 25,000 miles of canals. The small rectangle shows the area covered by Map No. 1.

The building of the Grand Canal appears to have been a comparatively recent event in Chinese history. The middle section is said to have been constructed about the sixth century B.C.; the southern section, between Chinkiang and Hangchow, during the years 605 to 617 A.D.; but the northern section, from the channel of the Hwang-ho, deserted in 1852, to Tientsin was not built until the years 1280-1283.

While this canal has been called by the Chinese Yu-ho (Imperial River), Yun-ho (Transport River); or Yunliang-ho (Tribute-bearing River), and while it has connected the great rivers coming down from the far interior into a great water-transport system, this feature of construction may have been but a by-product of the great dominating purpose which led to the vast internal improvements in the form of canals, dikes, levees, and impounding reservoirs so widely scattered, so fully developed, and so effectively utilized. Rather the master purpose must have been maintenance for the increasing flood of humanity.

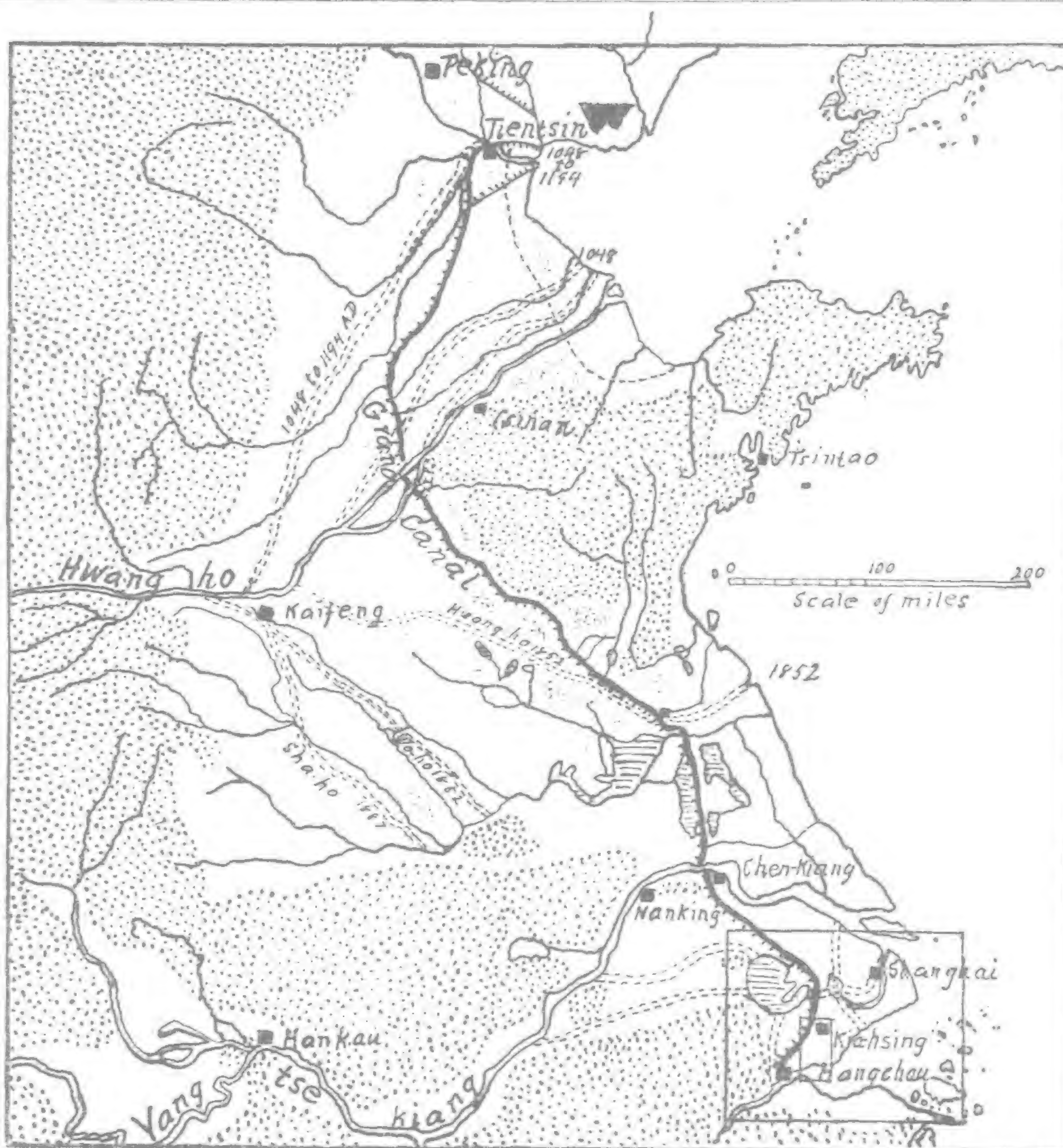
And I am willing to grant to the Great Yu, with his finger on the pulse of the nation, the power to project his vision for 4,000 years into the future of his race and to formulate some of

the measures which might be inaugurated to grow with the years and make certain perpetual maintenance for those to follow.

THE KEYNOTE OF PERMANENT AGRICULTURE

The exhaustion of cultivated fields must always have been the most fundamental, vital, and difficult problem of all civilized people, and it appears clear that such canalization as is illustrated on maps Nos. 1 and 2 may have been primarily initial steps in the reclamation of delta and overflow lands. At any rate, whether deliberately so planned or not, the canalization of the delta and overflow plains of China has been one of the most fundamental and fruitful measures for the conservation of her natural resources that they could have taken, for we are convinced that this oldest nation in the world has thus greatly augmented the extension of its coastal plains, conserving and building out of the waste of erosion wrest-

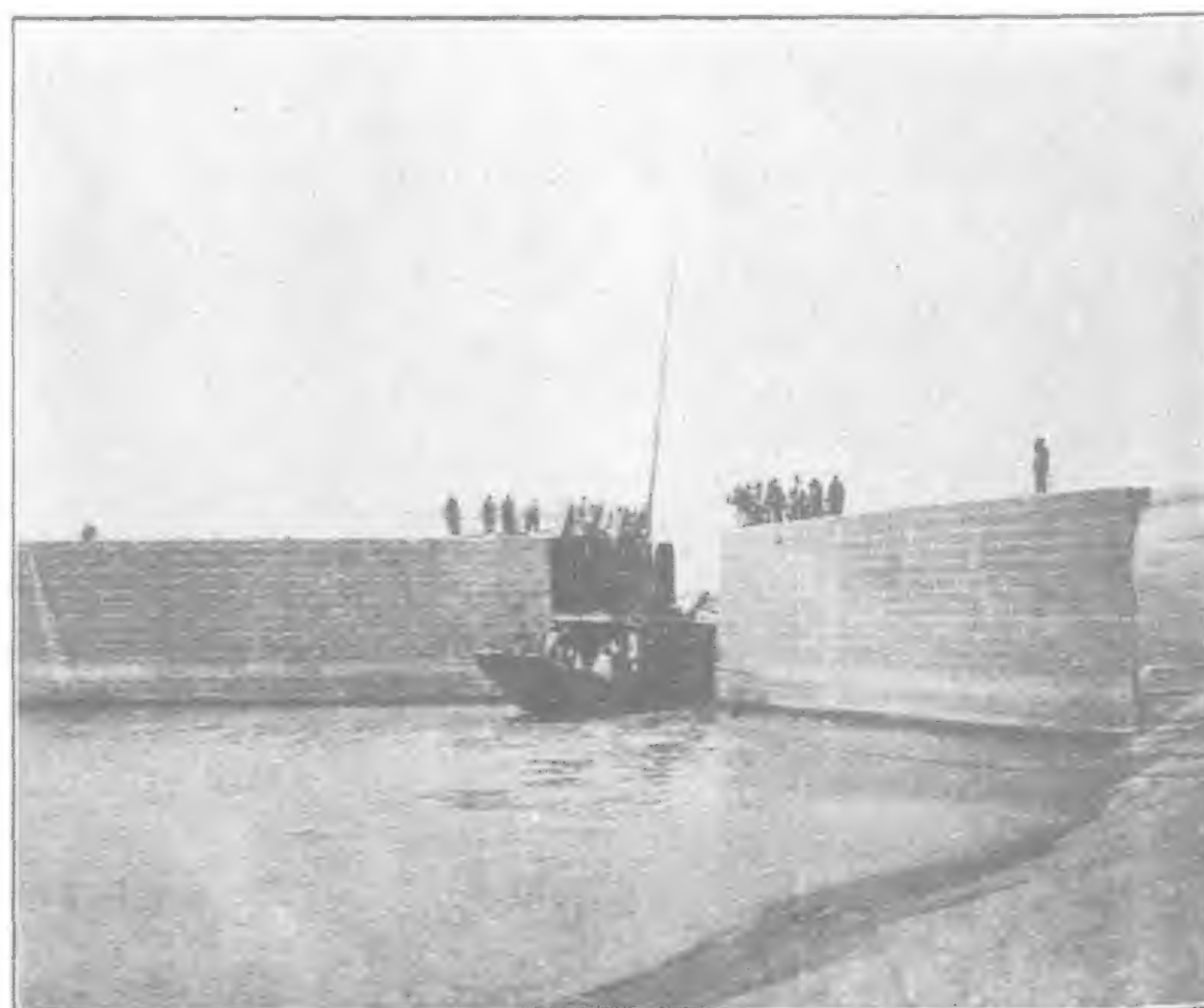
ed from the great streams hundreds of square miles of the richest and most enduring of soils. We have little doubt that were a full and accurate account given of human influence upon the changes in this remarkable region during the last 4,000 years, it would show that these gigantic systems of canalization have been matters of slow, gradual growth, often



Map No. 3.—Sketch Map of North East China, showing the alluvial plain and the Grand Canal extending 800 miles through it from Hangchow to Tientsin. The unshaded land area lies mostly less than 100 feet above sea-level



Dyke Building. A huge stone is hoisted by means of ropes by a number of men and does effective tamping work



Grand Canal Lock. This lock is one of the outlets of the Hwai River at Tsiang-kiang-pu, the passage way being 23 feet wide

initiated and always profoundly influenced by the labors of the strong, patient, persevering, thoughtful, but ever-silent husbandmen in their efforts to acquire homes and to maintain the productive power of the fields.

Nothing appears more clear than that the greatest material problem which can engage the best thought of China to-day is that of perfecting, extending, and perpetuating the means for controlling her flood waters, for better drainage of her vast areas of low land, and for utilizing the tremendous loads of silt borne by her streams more effectively in fertilizing existing fields and in building and reclaiming new land. With her millions of people needing homes and anxious for work, who have done so much in land building, in reclamation, and in the maintenance of soil fertility, the government should give serious thought to the possibility of putting large numbers of them at work, effectively directed by the best engineering skill.

It must now be entirely practicable, with engineering skill and mechanical appliances, to put the Hwang-ho and other rivers of China subject to overflow, completely under control. With the Hwang-ho confined to its channel, the adjacent lowlands can be better drained by canalization and freed from the accumulating saline deposits which are rendering them sterile. Warping may be resorted to during the flood season to raise the level of adjacent

low-lying fields, rendering them at the same time more fertile. Where the river is running above the adjacent plains there is no difficulty in drawing off the turbid water by gravity, under controlled conditions, into diked basins, and even in compelling the river to buttress its own levees.

There is certainly great need and great opportunity for China to make still better and more efficient her already wonderful transportation canals and those devoted to drainage, irrigation, and fertilization.

As we go to press it is announced that a preliminary agreement has been signed by the Minister of Agriculture and Commerce giving the American Red Cross Society the right, within a year, to arrange for a loan of \$20,000,000 U. S. Currency to carry out the Hwai River conservancy scheme. The loan will be floated at five per cent., and will be secured upon the lands to be reclaimed and the benefit from taxes to be levied in the regions protected from flooding, also the navigation taxes on that portion of the Grand Canal within the area.

The agreement includes the right to nominate the engineer-in-chief and the contracting company to execute the works. Mr. C. D. Jameson will probably be the engineer-in-chief and the contractors will be the well-known firm Messrs. J. G. White and Co. of New York.

MR. LAO CHU-CHANG

Mr. Lao Chu-chang, the Managing Director of the Pukow-Sinyangchow Railway, is a native of Yan-Hsiu-Yuan of Shantung. In 1880 he began his education in a military school in Tientsin. Afterwards he made a study of railway construction in a German railway college, from which he graduated in 1894, and entered the service of the Peking-Mukden Railway as an engineering student to assist in the construction of the Dog River Bridge. After the completion of the bridge in 1897 he was transferred to Luan-chow, and was made assistant engineer.

During the Boxer trouble in 1900 Mr. Lao rendered excellent services to the railway, and spared no pains to devise means to protect the line and its properties. While the German and Russian troops were in possession of the line, he was engaged as a mediator between the foreign troops and the Chinese officials.

The important service rendered to the country at that time was recognized by the bestowal of the rank of district magistrate by the Manchu Court through the recommendation of the Director-General and Engineer-in-Chief of the railway, and also by his promotion in 1902 to the post of district engineer at Ching-chow.

In the summer of 1903 several bridges in the section of Ching-chow were destroyed by floods. Under his direction repairs were immediately made and steps were taken to prevent further damage by floods. He personally supervised the work day and night, and as a recognition of his hard work a eulogistic testimonial was presented to him by the Engineer-in-Chief.

In 1905 Mr. Lao took up the post of Engineer-in-Chief of the Chekiang Railway. Though he did not stay long in the service of this railway, yet he undertook very heavy bridge constructional works, which were carried to the entire satisfaction of all concerned.

Mr. Lao then became connected with the southern section of the Tientsin-Pukow Railway, and was given an important post in the Head Office at Nanking. He rendered useful service in dealing with the northern and southern troops during the Revolution in 1911 in the direction of maintaining the neutrality of the railway. As a result of his success Hsu Shih-chang, the then Director-General of the railway, strongly recommended him for recognition.

In the beginning of last year he was called up to Peking by Mr. Shen Yun-pei, the Director-General of the Pukow-Sinyangchow Railway, and was appointed Chinese engineer of the line. It was not until the completion of a survey of the whole line that he was made Managing Director of the railway.

A photograph of Mr. Lao appears on page 310.

TIMBER RESOURCES OF CHINA

All over Northern China, says a recently-issued report on the timber resources and trade of that country, the forests have been destroyed. There exist only a few groves near the churches or tombs, and partly also round the fields. All the same, one cannot say that China is quite devoid of trees. To the south of the River Yangtze, in the mountain regions, the original forest has been preserved, abounding in rich varieties, chiefly hard woods. What extent of area is occupied by these forests it is impossible to define, for they have never been investigated; but the forests there are not only sufficient to satisfy the requirements of the local population, but they are exploited for the purpose of supplying a considerable portion of North-Eastern China with working wood and fuel, as well as the foreign colonies in China, and some neighbouring countries. Of the botanical composition of the timber plantations of China information is quite lacking, or almost so. Besides the sorts which yield building wood, we can indicate here the growth of timber, which is of great commercial value, such as the varnish tree, the wax palm, the mulberry tree, etc.

The richest area in trees is Manchuria, where the most plentiful varieties are the pine, the cedar, the larch, the fir, the yew, the oak, ash, the elm, the walnut, the anarant, the birch, the lime, etc.

The timber wealth of Northern Mongolia consists of pine, fir, elm, holly oak, walnut and willow. In Eastern Turkestan the chief features in the forest wealth of the land are birch, pine, fir, larch and poplar. But respecting Tibet, it is known that the leading trees are in its south eastern part, and are the pine, fir, cedar, elm, holly and several form of willow. In view of the destruction of timber over great expanses of land and the growing demand for timber goods, which are continuously rising in price in some of the Provinces of China, the systematic cultivation of timber has already been resorted to on a comprehensive scale in parts that have escaped from unsystematic felling. It may be hoped that with a rational organisation of the timber business China may become a great exporting market, as it is difficult to find a place on the face of the earth where the conditions for producing other than acicular trees are so favourable. The foundation of timber cultivation in China is already laid. But meantime the country is in sore need of imported wood.

China's Timber Needs.

The principle areas in China where timber is called for are the centre and north, for there the forest lands have been practically laid bare. The most important requirements in foreign-grown wood consist of various soft kinds, such as Oregon pine, Californian red wood, fir, Japanese and Korean pine, cedar, aspen, lime, poplar, etc. The value of soft wood recently imported was as follows (in lan):—2,502,819 in 1911, 2,051,592 in 1910, 2,472,052 in 1909 and 3,404,000 in 1908, chiefly from Japan, Formosa, and from the United States of North America; in fact, almost entirely from the countries named. The timber exports valued 14,084 lan, 18,777 lan, 5,428 lan and 17,568 lan in 1911, 1910, 1909 and 1908 respectively. The value (again in lan) of hard wood imported in the series of years quoted was as follows:—1,575,477 in 1911, 1,976,971 in 1910, 1,597,239 in 1909, and 1,563,986 in 1908, and the corresponding exports of hard wood made 48,614 lan in 1911, 48,445 lan in 1910, 7,974 lan in 1909 and 12,860 lan in 1908. Here it may be observed that about half of the hard wood imported into China comes from Japan. Considerable quantities were received from Hongkong, Singapore, Australia and from the Philippine Islands. Russia's share of the business is insignificant.

Importations.

China is an importer of large quantities of sandal wood. The value of such imported in the year 1911 was 930,756 lan. The greater part (seven-eighths) of this comes from Hongkong. Then there is a considerable import movement in sundry timbers, such as pit wood, which last named in 1911 valued 895,585 lan. The importation of furniture and timber goods for making furniture valued 760,610 lan in 1911. European and Asiatic Russia's share in this business is a growing one, and was represented by a value of 58,000 lan in 1911. Manufactured timber goods, independent of furniture and machinery parts, were imported in 1911 to the value of 230,086 lan.

The importation of matches into China is very large, and greatly exceeds in value that of both hard and soft woods as well as various wood products taken separately. The total importation of matches valued 5,303,372 lan in 1901, 5,294,569 lan in 1910, 5,680,676 lan in 1909, and 5,168,520 lan in 1908. The corresponding export figures are hardly worthy of mention. Japan is the largest provider of the matches. The value of wood pulp imported in 1911 was 130,157 lan, chiefly from Great Britain, followed by Sweden, Norway, Germany, etc.

The total of native wood exported including roundwood, poles, posts, hewn beams and sawn wood of all kinds, through open ports, for distribution in the country, or for foreign lands, valued 4,992,675 lan in 1911; the shipments abroad valued 1,845,623 lan. China exports a considerable quantity of firewood and imber manufactures, such as furniture, and particularly bamboo, with manufactures thereof.

INTERNATIONAL INTRIGUES IN CHINESE RAILWAYS

AN ANALYSIS OF BELGIAN AND FRENCH RAILWAY ACTIVITIES IN CHINA, DISCLOSING THE TRIUMPH OF RUSSIAN DIPLOMACY, THE SIDE-TRACKING OF BRITISH DIPLOMACY, THE LOSS OF CHINA'S FREEDOM OF ACTION, AND THE MENACE WHICH OVERHANGS HER

Under the title of the "Growth of Belgian Interests in China," the FAR EASTERN REVIEW, in its issue of August, 1913, drew attention to the fact that the signing of the agreement for the construction of a railway longitudinally through Shansi, with an extension to Chengtu, the capital of Szechuan province, coupled with the previously signed agreement for a railway from Lanchow to the sea, brought "forcibly to notice *the most important development in international enterprise which has taken place in China in recent times.*" That development was the surprising growth of Belgian interests, combined with the possibility of the co-operation therein of Russian finance or diplomacy, or both. We briefly alluded to the significant connection of Russia with the early participation of Belgian financiers in Chinese railway loans, and after citing instances, concluded the article with the suggestion that "The one thing that is certain is that the loan will not be purely Belgian, and the interesting point to China is: How far does Russia financially or politically participate?"

It interests us peculiarly to see that the importance of this unique advance on the part of Belgium escaped the notice of other publicists until January of this year. The Peking correspondents of *The Times* and the *Daily Telegraph* of London were then prompted to a realisation of it by the statement that the Belgians proposed to establish the seaport of the midland trunk line from Lanchow, (in Kansu Province) at the port of Haimenting, on the north bank of the Yangtsze River, some fifty or sixty miles from Shanghai, instead of at Haichow, as originally suggested—a possibility which was emphasised in the April, 1913, issue of the FAR EASTERN REVIEW.

The correspondent of *The Times* discovered the possibilities of a portentous design on the part of Russia as a result of realisation that British preserves in the Yangtsze bade fair to be trespassed upon, and since his telegram further opens up one of the largest questions which has yet entered the polemical sphere connected with international railway activity in China we reproduce it with the object of using it as the peg upon which to hang argument which it is competent to use to demonstrate the union of purpose and interests which deduction can prove to exist between Belgium, France and Russia in their railway policies in China. *The Times* correspondent says:—

"The belief is current that the Chinese are about to consent to an important alteration in the alignment of the Belgian trunk railway between Lanchowfu and Haichow. Haichow proving on examination unsuitable as a port the Chinese are being pressed to agree to allow the railway, after crossing the Tientsin-Pukow line near the Shantung border, to run southward along Kiangsu province to Haimenting, on the northern bank of the Yangtsze, a small port within fifty miles of Shanghai.

"The change involves the construction of a line parallel to the British section of the Tientsin-Pukow railway, calculated to affect the traffic of the latter. This aspect of the question, however, is of minor importance compared with the prospect of the establishment of the terminus of what must eventually be the longest railway in China at a new port actually on the Yangtsze within a stone's throw of the greatest emporium for British trade in the Far East. So definite a challenge of the British position in the Yangtsze, following on the recent intrusion of French enterprise at Pukow, provokes lively comment here.

"If the Lanchowfu-Haichow railway were a purely Belgian concern less importance might be attached to the present move. But it is well-known that Belgian enterprise in China is largely financed by the French while in some quarters it is believed to be supported politically and financially by Russia. The Lanchowfu-Haichow railway realises a part of a long cherished Russian scheme to build a railway from Russian Turkestan, through Chinese Turkestan, to Lanchowfu and thence into the heart of China. Should such a line ever be built it will be purely Russian at its western extremity and by reason of Russia's relations with France is liable to become subject throughout to the control of Russia.

"The French are now demanding from the Chinese the sole right to construct a line from Yunnanfu to Chengtu. Significance attaches to this scheme because it involves the linking up of the French Yunnan railway

with the other great Belgian project from Chengtu to Tatungfu for which the concession was lately obtained. This Belgian scheme is really mainly French, and suspected to be partly Russian, and will inevitably connect hereafter with a Russian trans-Mongolian railway in the north, thereby creating another tremendous steel road based in Russian territory and potentially Russian throughout its length.

"The somewhat fantastic view that Russia under cover of French and Belgian railway enterprise is preparing to swallow the whole of China does not affect the fact that such enterprise is encroaching on British preserves in the Yangtsze and endeavoring to acquire exclusive rights in Yunnan and Szechuan despite an Anglo-French agreement to share equally in these regions."

The Peking correspondent of the *London Daily Telegraph* (Mr. Putnam Weale) also telegraphically drew attention to the subject in his usual vigorous style, and in the course of a despatch said:—

"In continuation of my yesterday's telegram regarding Russia's protest against China opening to international trade and residence five cities in Inner Mongolia, the semi-official press to-day makes the significant announcement that the Sino-French Industrial Bank has finally accepted as security for its £6,000,000 loan, the signature of which was long ago reported, the Peking city octroi receipts. The bonds will consequently be offered for subscription in Paris and London at the end of February. The bank is paying money to the Chinese Government in half million sterling monthly instalments.

"This means another nail in the coffin enclosing Britain's lost prestige in China. Not only has the policy of Sir Edward Grey in attempting to keep up an impossible monopoly disgusted all British enterprise and made English representatives report home the uselessness of their activities, but, in addition, under cover of an embargo on British enterprises, Franco-Belgian agents have secured the richest prizes. By far the most important is the double trunk railway which the Belgian agents, acting for a Franco-Belgo-Russian combination, secured last summer, and which is now being actively built from the extreme north-western part of China to the Yangtsze estuary, reaching the sea, not at Haichow, as originally scheduled for the purpose of bluffing, but at Haimenting, an anchorage on the north bank of the Yangtsze, 70 miles from Shanghai, which has already been surveyed.

"This is the point at which Russia will ultimately debouch upon the Yellow Sea unless some Power other than England intervenes.

"From Tatung, in Shansi, the present limit of the eastern branch of the Belgian trunk line to autonomous Mongolia is only a few hundred miles, and the entire strength of Russian diplomacy is therefore concentrated on winning from China a demarcation of the independent Mongolian boundary as far south as possible, making the construction of the remaining railway links thereby easier.

"The fact that the French Industrial Bank has virtually acquired the port of Pukow and the right of betterment of Wuchang and Hankow with the proceeds of the present loan shows how much has already been done, whilst the recent demand of the French Minister for a railway concession uniting Yunnanfu and Chengtu forms one of the last links necessary to make complete the chain of a Franco-Belgo-Russian system, enveloping the whole of China and issuing on the sea. . . .

"Since the first shots of the Chinese revolution were fired at Wuchang two and a half years ago British policy may best be described as a series of unmitigated mistakes, principally due to championing the cause of a financial combination which has no right to exclusive support, coupled with the steady discouraging of all who could have saved the situation.

"When one looks back and sees how much has already been deliberately lost and how unpromising is the future, the feeling deepens that some reckoning should be called for by Parliament and that something should be promptly done."

The Times correspondent, unlike his literary confrère, does not express with conviction the view that Russia is the master hand behind the development of Belgian or Franco-Belgian interests in China, though he shows clearly enough that the acquisition of rights by Belgium and France to construct through railway lines which cut China virtually north and south, and east and west stands politically to benefit Russia considerably and to work to the ultimate detriment of Britain. The correspondent of the *Telegraph* is more emphatic. Above all he awakens his people to a sudden realisation of the fact that Russian and French diplomacy has signally triumphed, while that of Great

Britain has been anything but successful, and paves the way for the critical investigator to examine, analyse and assemble evidence to show that there may not be so much fantasy as the *Times* correspondent puts it, in the proposition that Russia is a semi-somnolent partner in the extraordinary railway schemes of Belgium and France as the *Times* correspondent is charitably inclined to suppose.

For the purpose of throwing enlightenment upon a very important question, therefore, we propose to augment the evidence mentioned in the above-quoted telegram, doing so, of course, without prejudice, and in an academic manner.

RUSSIA'S AIMS IN THE FAR EAST.

It is generally conceded that the great aim of Russia in the Far East has long been, and is, to obtain an ice free port as an outlet for her immense territories in Siberia and Central Asia. Checked in her designs to find a way through Persia to the Persian Gulf, and forced back in her advance on India, she was compelled to seek the outlet at the eastern end of her great empire at Vladivostock. The history of the Siberian railway, and the concession for the Chinese Eastern line through Manchuria is common history, as is also the sequel which gave to Russia the railway from Harbin to Port Arthur and the lease of the Liaotung Peninsula.

The war with Japan, which wrested from Russia the fruits of her diplomatic victory, and compelled her to relinquish the Liaotung Peninsula and the South Manchuria Railway to Japan, and which deprived her of the use of the Chinese Eastern Railway for strategic purposes, compelled her to seek other means to regain her lost position.

Hardly had the ink dried upon the Portsmouth Treaty, than the Russian Government authorized the double-tracking of the Siberian railway and granted the appropriation for the construction of the Amur lines. These works have been actively pushed ahead in the last four years, and the Amur line is nearing completion, while the double tracking of the Siberian railway is about seventy-five per cent. completed. Many other new lines* are projected for the exploitation of Central Asia, some of which have received the sanction of the Government. Vladivostock has been made practically impregnable, but as it lies exposed to Japan it may be wrested from her in another war. As a commercial port, however, it has great disadvantages, for it is open for only half the year and can never serve as an adequate outlet for the great Siberian country and its rapidly expanding trade and industries. Confronted by Japan in South Manchuria, Russia cannot hope to secure a seaport in that direction except through another costly and disastrous war.

In all books dealing with Russian policy in Asia the fact is emphasized that one of her great dreams is an approach to Peking across Mongolia via Kalgan. In the negotiations caused by the signing of the Chinchow-Aigun railway loan agreement, Russia agreed to withdraw her objections to the construction of that line, and suggested that a railway from Kiachkta to Kalgan be built instead. The project for a railway from Kokand (Kojend), the terminus of the Central Asian line, through Kashgar, Hami, Suchow to Lanchow-fu, in China, has always been set aside for Russia to finance and construct, and is looked upon as one of her unquestionable rights.

RUSSIA AND THE PUKOW-HANKOW CONCESSION.

In 1898, during the "Battle of Concessions" for railways in China, the great desire manifested by Russia was to secure control of a railway from the north which would join with a line from Indo-China, and so establish a through trunk route bisecting China, and under control of the Dual Alliance. Only the constant vigilance and prompt measures of the British Government frustrated those designs at that time. The tension was so great that the British and Russian Governments were constrained to enter into an understanding, †which precluded the Russians from

seeking railway concessions trespassing upon the Yangtsze valley and Britain from seeking concessions to the north of the Wall.

With this agreement still in force, Russia may not openly take active steps to secure advantages in Central or South China, and can only accomplish her ends through the medium of a third party. This, Russia has apparently done by entrusting her interests to others. She has retired into the background, and confided the active work of advancing her political interests to her political ally and her financial agent.

When the Belgians entered into the field for railway concessions in competition with the great Powers, the suspicions of the Chinese seem to have been lulled by the innocent arguments that Belgium was only a small country with no army or navy, and whose only interest was to find an outlet for her manufacturers of iron and steel products. The Chinese fully believed these statements, even when the real truth was pointed out to them, and despite all warnings sustained their confidence in the honeyed words of the Belgian promoters.

The British Government, however, appears to have entertained no illusions at that time as to the real character of the Belgian syndicates seeking concessions in China, and clearly saw the hand of Russia in the negotiations for the Peking-Hankow line—a railway which would admit Russia into the Yangtsze valley without ostentation. As a matter of fact the most powerful supporter of the Belgian syndicate was the then Russian Chargé d'Affaires (M. Pavloff) in Peking, and the French Minister. The then British Minister at Peking, Sir Claude MacDonald, protested vigorously to the Tsungli Yamen (Office of Foreign Affairs) against conceding the Peking-Hankow line to Belgium because of Russia's participation in the syndicate; and the Tsungli Yamen in reply, assured the British Minister that the Russian Bank was not interested in the scheme, and that no agreement admitting the Russo-Chinese Bank to participation would ever receive the Imperial sanction.

Three days after the Chinese Government gave this assurance the Peking-Hankow Railway Agreement was signed with an ostensible Belgian Syndicate. In Article 18 it was stipulated that the Russo-Chinese Bank would be the Agent for the Bonds, and Article 20 provided that the Russo-Chinese Bank should be the Bank of deposit and the medium for monthly payments.

Here, then, was absolute proof that the Belgian negotiators had either got on the blind side of the Chinese, or that the latter, knowing the facts, had wilfully deceived the British Government.

This breach of faith and slight to Great Britain was costly to China. The British Government immediately demanded compensation for the affront, and insisted upon China granting the concessions for the Shanghai-Hangchow-Ningpo, Shanghai-Nanking, Canton-Kowloon, and Pukow-Sinyang Railways as the penalty for giving the rights to build the Peking-Hankow line to the Belgians with Russian participation.

So here, at the very outset of the struggle for railway concessions in China, Russia employed her Belgian Agent with success to pull the wool over the eyes of the Chinese Government, to bring discredit upon its high officials, and cause her to lose face with Great Britain.

The Peking-Hankow Loan Agreement is usually accepted as a Belgian enterprise by the Chinese and others unacquainted with the true facts, but the French Yellow Book (the official publication of the French Foreign Office) in its issue of June, 1900—where it explicitly enumerates the various railway and mining concessions held by French Companies in China—specifically says that the Peking-Hankow concession is Franco-Belgian, and that the line is built and operated for the mutual profit and equal advantage of the French and Belgian parties. The French participation, according to this official French Government report, is 60 per cent. and the Belgian 40 per cent. So here again is absolute proof from the highest possible source that the so-called Belgian loan and concession was in reality 60 per cent., French.

When it is kept in mind that the Russo-Chinese Bank was the official financial institution of the loan in China, and the Russian Chargé d'Affaires in Peking was the strongest supporter of the syndicate in forcing the loan through, it becomes apparent

*These new projects were fully described in the September, 1912, issue of the FAR EASTERN REVIEW.

†Under date of April 28, 1899, Sir Charles Scott and Count Mouravieff, Russian Minister for Foreign Affairs, exchanged notes wherein Great Britain engaged herself not to seek any railway concessions to the north of the Great Wall, while Russia undertook not to seek railway concessions in the basin of the Yangtsze. Both undertook not to obstruct each other in their respective spheres.

that the Russians also had a fair participation in the syndicate. At all events it is clearly emphasized that the Belgians had acted as the agents of France and Russia in securing the concession, and lulling the suspicions of Great Britain and the Chinese to the true character of the syndicate. It is clear, in view of the facts made public in this case, that the Russian interest in the Peking-Hankow line is deeper than appears on the surface, and that China willingly or unwillingly played into the hands of the Belgians, and had to pay the price for the deception to the British Minister.

SIDELIGHTS FROM OFFICIAL RECORDS

Some interesting sidelights are thrown on the exact status of the *Société d'Etudes de Chemins de Fer en Chine*, by reference to various official publications of the British and French Governments.

The British Blue Book for 1900, on page 61, reproduces a communication from Sir Charles Scott to the Marquis of Salisbury, dated St. Petersburg, March 23, 1899, which reads as follows:—

"My Lord,—The Belgian Minister referring yesterday to the recent publication of Parliamentary Papers on Affairs in China, said to me that he understood they contained an interesting account of our opposition to the Belgian concession for the Peking-Hankow Railway, which from what he was told of the correspondence, was based on an entirely mistaken conception of the part which the Russian Government and Russo-Chinese Bank had taken in connection with this concession.

"As he had had to deal with all the communications on the question, he was anxious to give me the most solemn assurance, which the Director of the Russian Bank would be able to confirm, that not a single Rouble of Russian money was invested in that concession, and that the Russo-Chinese Bank had no share or interest in it whatever, except having undertaken to act as Bankers for the Belgian Syndicate. It was a purely Belgian undertaking with the object of developing Belgian industry, and the Russian Government had consented to give the Belgian Government its support in obtaining the concession, for the simple reason that a small country like Belgium could have no possible political object in view, and the Russian Government has said that they could on that account more readily support it than if the undertaking had been German, British or French."

The British Foreign Office was, however, apparently not entirely satisfied with these assurances, and in the meantime, the prospectus of the Loan was published in Brussels, a copy of which was forwarded to London by the British Minister at Brussels, Sir F. Plunkett.

The prospectus disclosed that the Board of the *Société Belge pour l'Etude de Chemins de Fer en Chine* was composed half of Belgians and half of Frenchmen, and the two countries would supply each half the employees for the construction of the line, and share the orders in connection with it equally, while of the money lent, 60 per cent. was supplied by the French and 40 per cent. by the Belgians.

Sir F. Plunkett in a communication to Lord Salisbury, dated Brussels, May 6th, 1899, furthermore said:

"My Lord,—The language held by the Belgian Minister at St. Petersburg, reported in Sir Charles Scott's dispatch of the 23rd of March, relating to the Belgian concession for the Peking-Hankow railway (forwarded to me by your Lordship) is identical with that generally held to me here.

"Whenever questioned, the Belgian Government authorities all unite in repeating that the money and interests engaged in that concession are mainly bona fide Belgian, and that the reason why the promoters of this concern had employed the Russo-Chinese Bank was solely because that institution met them in a more friendly spirit than did the English local Banks and commercial magnates, who (they say) sought to exclude the Belgians from participation in the distribution of Chinese Concessions."

It is thus seen that the Belgian authorities all united to uphold the "bona fide Belgian" character of the Syndicate, and justify the connection with the official Russian Bank. The French Government, however, had nothing to conceal, and in the French Yellow Book (*Chine*, Juin-Octobre 1900, pp. 23-27) gives the official French version of the status of the Syndicate as follows: "The *Société d'Etudes de Chemins de Fer en Chine*," a Franco-Belgian syndicate in which the French element is represented by the big financial establishments of Paris and the big metallurgical industries of France, has received a concession of a railway from Peking to Hankow. The two contracts relating to this line, for a loan and for operating, are dated the 26th of June, 1898. The line will have an extension of about 1,250 kilometers. It is being built and will be operated by the *Société d'Etudes* for the mutual profit and equal advantage of the French and Belgian parties.

"The loan to be floated is 112,500,000 francs. It has been agreed that the French financial share shall be three-fifths, that of Belgium two-fifths. A first issue of 133,000 bonds of 500 francs 5 per cent. was made at Paris and Brussels on April 19, 1899. 226,800 bonds were subscribed for, 190,800 at Paris and 36,000 at Brussels. The product of this first issue will suffice to build 500 kilometers, of which 300 are in the north and 200 in the south, and which will be soon finished. 150 kilometers in the north are already being operated. The building of the remainder will be seen to by a second issue as soon as circumstances permit of it."

It will be noted that although it was arranged that the Belgians should take 40 per cent. of the loan, the French Government officially declares that the proportion of the first instalment of the loan was only taken up as to about 15 per cent. in Brussels, the Paris bankers taking up the balance, or 85 per cent.

After reading Sir Charles Scott's letter to Lord Salisbury the question naturally arises: Why was the Russian Government so willing to support a concession for Belgium rather than openly support what it must have known to be a proposition of its political ally? The facts disclosed are irrefutable, and the question again arises, if the Syndicate was actually French, why did it select the Russo-Chinese Bank as its agent in China when the business could have been done through the official French institution (the *Banque de l'Indo-Chine*)? Did the Russian Government support the syndicate merely for the petty banking profits for the Russo-Chinese Bank on the handling of the funds in China?

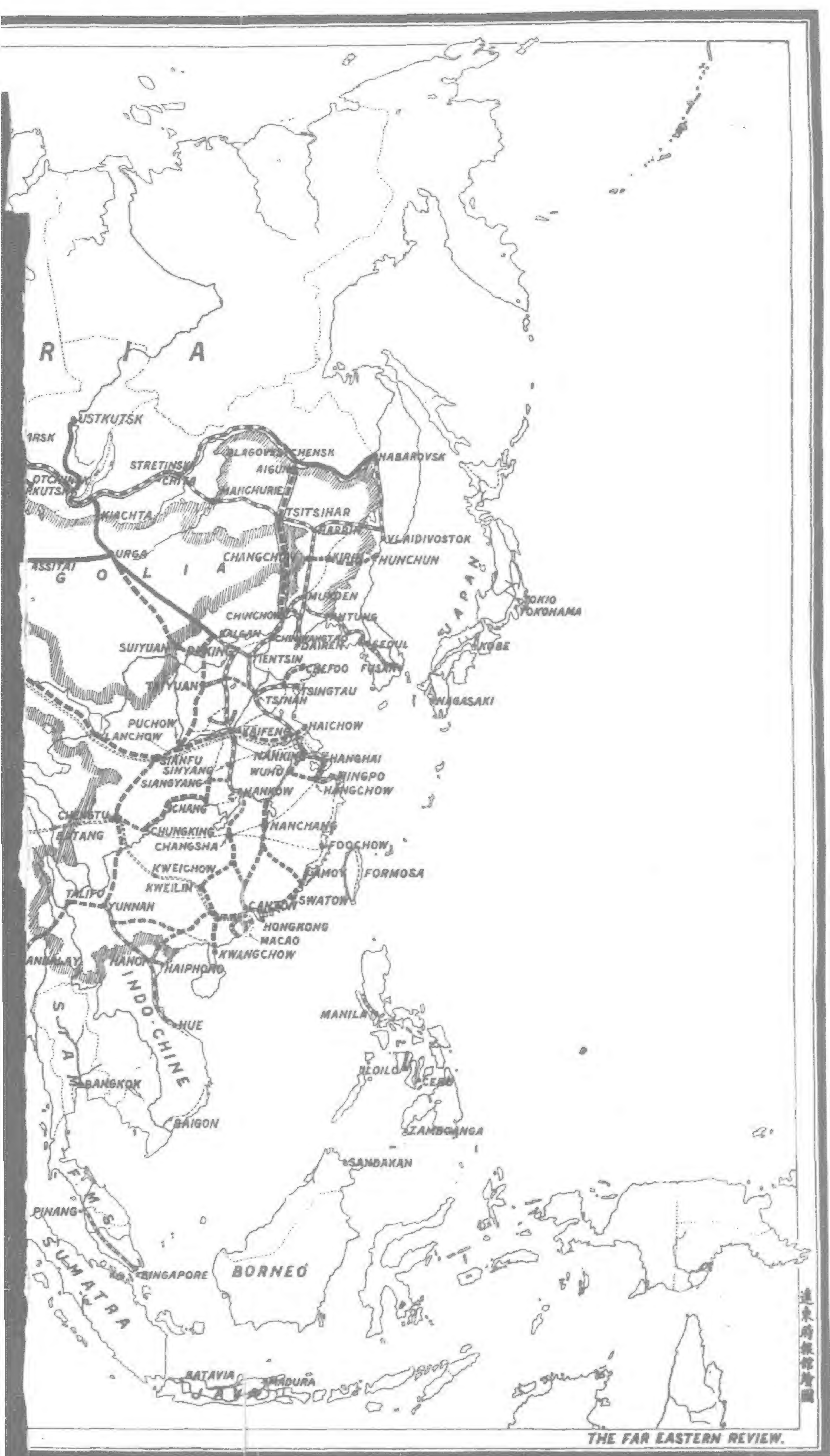
With the above official facts clearly established, and the further fact that the *Société Belge pour l'Etude de Chemins de Fer en Chine*, is now an integral part of the Official Russian Group, it would appear that the anxiety of the British Government concerning the actual status of the Syndicate had some real foundation.

THE CANTON-HANKOW RAILWAY INTRIGUE

With the control of the Peking-Hankow line securely in the hands of the Franco-Russo-Belgian combination, giving them a line from Peking to the Yangtze, the allies, intent on their original scheme for a through trunk line dividing China and connecting Russia on the north with her ally in Indo-China, set about to undermine the position of the Americans who at that time held the concession for the line from Canton to Hankow. They had tried hard to secure this concession in competition with the Americans, but had failed, so they then planned to secure control of the American-China Development Company by the open purchase of the shares of the company on the New York stock market. The history of this intrigue and its success is familiar to all interested in Chinese railway history. The Belgian agents quietly purchased the shares on the open market from the unsuspecting American shareholders, and when they had secured control of the stock, they assumed the direction of the company and the work in China. The American engineers were discharged and supplanted by Belgians, and the latter undertook the work of construction of the line.

The Chinese became alarmed as they awoke to the fact that the Belgians had become masters of a dangerous situation, and that the control of the through trunk line from Peking to Canton was liable to fall into the hands of the Russians and their French allies. The Chinese, urged by interested parties, demanded the cancellation of the American concession, and although the firm of J. P. Morgan & Company repurchased the shares to regain the control in the hands of Americans, the Chinese insisted on the cancellation as a penalty for the breach of faith, and America, deferring to the professed desires of the Chinese to construct the line with their own funds, finally assented to hand the concession back to China, in return for \$5,500,000, which sum the Chinese borrowed from the Hongkong Government and thus virtually handed over to British interests the rights surrendered by the Americans.

China, at that time made America pay the price for the breach of faith, an error which was not committed with intention, as the shares were bought up on the market privately. But leaving out of the question the feelings of the Americans who had



Reprinted from the *Far Eastern Review* of September, 1912.)

and Lines -----; That part of the Trans-Siberian Railway between Omsk and Chita, that was prohibited by Russia is shown =====. Although Russia emphatically refused to acknowledge to Russia's strategic position on the Amur, the Map clearly shows that Russia has paralleled the Mongolian and Sinkiang. In the above map the Trans-Mongolian Railways (Kalgan-Urga) program.

been duped by the Belgians and pushed out with the aid of the British, the main object of the latter was achieved, and the Belgians and their Russian partners were blocked in their scheme to secure control of the through trunk line.

China was saved, and the British position was secured in the South Yangtze region, but the Americans have never forgotten or forgiven the intrigues which made them lose face with China, and which held them up to the ridicule of the financial world. Those on the inside knew that in due time the situation would be repeated, and they have patiently waited to see what attitude China and the other interested parties would assume when the shoe became transferred to the other foot.

Having now clearly demonstrated the designs of the Franco-Russo-Belgian combination which were frustrated in this great scheme we can take up and trace the other ramifications of the general policy of these political and commercial allies. But before pursuing the matter further it may be well to point out that the title of the Franco-Belgian Syndicate who secured the concession for the Peking-Hankow line was the Société d'Études de Chemins de Fer en Chine, an organisation which, as will appear later, was in reality the agent for Russian political designs on China.

ACTIVITIES IN WESTERN CHINA

As pointed out in the commencement of this article one of the great dreams of Russia has always been to secure control of the approach to Peking through the Kalgan Pass, and at the time that France secured the concession for the Yunnan line, and subsequently, the French and Russian papers—reflecting the political sentiments of their governments—devoted considerable space to the advisability of securing the concessions for another trunk line through Western China, to connect at Kalgan with the Trans-Mongolian project, to then strike south through Taiyuanfu to Sianfu, and thence to Chengtu and Yunnanfu, where it would link up with the French line to the sea at Haiphong.

Such a line was purely for the advancement of Russia's strategical position in China and Central Asia. It would complete a trunk line bisecting China to the west, away from the coast and the interference of other Powers; would bring the northwest and western provinces within the Russian sphere of influence, and, when the line connecting with Urga was completed, would constitute a through military line for an army of penetration from both North and South. These lines have appeared in many foreign maps and have been designated as Russian projects, and to those who have studied the railway policies of the various Powers in China, no other construction can be placed on the designing of the lines.

It will be remembered that in 1898 the Russo-Chinese Bank secured the concession for the line from Chengtingfu to Taiyuanfu. The question arises, why did Russia seek a concession in the province of Shansi? The answer may perhaps be found in the verbal agreement given by H.E. Sheng Kung-pao (the then Minister of Communications) to the Russo-Chinese Bank, that if the Bank constructed the line to the satisfaction of the Chinese Government, they would be accorded the right to construct the extension from Taiyuanfu to Sianfu. It is well to bear the fact in mind that the right to construct the extension was promised to the Russo-Chinese Bank.

Shortly after the Russians secured the concession for the Taiyuan line, the Belgians succeeded in signing the agreement for a line from Kaifeng to Honanfu, along the Yellow River. Why did the Belgians set such store upon a short, apparently insignificant line that began nowhere and ended nowhere, and had no outlet to the sea except over the rails of the Peking-Hankow line?

Was it simply to act as a feeder for the main line? That was the impression allowed to prevail. The real answer perhaps may be found in the fact that the Agreement gave them the right to construct the extension to Sianfu.

Was there any coincidence in the fact that both these lines had the same destination? It is competent, in the light of later events, to argue that both these innocent agreements for short unimportant lines followed a well defined and deep laid policy for control of north-west China.

In the French Yellow Book of 1900, the French Government frankly states that although the concession for the Taiyuan line was secured by the Russo-Chinese Bank, the construction and operation of the line had been entrusted to the French Group in the Russo-Chinese Bank. The same Book also officially states that the Compagnie Général de Chemins de Fer et de Tramways en Chine, which had secured the Kaifeng-Honan Concession, was in reality a Franco-Belgian Company, and this indicates the predominance of the French capitalists in the concern. It is a significant fact that after the Taiyuan line was completed, and the Russians had handed over control to the French section of the syndicate, that the petition to the Waiwupu for the privilege of extending the line to Sianfu, as promised by H.E. Sheng, was made by the Belgian Minister at Peking. Here we again have the most convincing evidence of the harmony of interests binding Russia, France, and Belgium.

RUSSIA'S RENEWAL OF ACTIVITIES

At this time, or about four years ago, Russia's prestige had declined in China as a result of the war with Japan, and it was necessary to entrust her interests to her ally and agent until she could resume diplomatic activity in Peking on her own behalf. Russian policy in Asia never changes; it may be checked at times, but Russia quietly awaits her opportunity and at the right moment presses forward and regains her lost ground. Thwarted by Japan and Britain in gaining her ice free port at Dalny, she has had to readjust her position and policy to the changes brought about by the war. Russia must have such a port for the development of her great Asiatic Empire, and, as she has none of her own, she must necessarily take it by force from her neighbor, which, in this case, is China. As she is not yet ready again to try conclusions with Japan and her formidable ally, she has had to attack the problem from the flank and press her borders out at the expense of China, and with the aid of her ally and her agent attempt to gain in China Proper what she has had to relinquish in Manchuria.

The Revolution presented her with the opportunity in Mongolia. The dominance of Mongolia by Russia under the guise of acknowledging the independence of the Mongolians is fresh history. With the loss of her sovereignty over Outer Mongolia, China has to carry on a costly and tedious warfare against the Urga authorities who now claim jurisdiction over all the Mongol tribes, for the final possession of the Inner Strip. Why has Russia forced this issue on China at a time when the Government is struggling to hold the country together and preserve its integrity in the greatest crisis of its history?

The reason is not far to seek. Russia's plans are bearing fruit, and the dissensions and jealousies of the Powers and the Bankers have presented her with an opportunity, which she has profited by, to advance her interests.

THE NOTORIOUS "BELGIAN LOAN"

We must go back to the time of the Revolution and trace briefly the struggles of both sides to secure funds to carry on the war. All the foreign Governments had agreed to maintain neutrality, and through their control of the Quadruple Financial Groups, the four large lending nations had effectively closed the door to any independent loan. Up to this time, Russia and Japan, owing to their being borrowing nations, had not actively entered into the competition to finance China, except in a small way. But the Revolution with its iron bound monopoly of the Quadruple Group opened the way for their activities. Russia's opportunity had arrived.

In November, 1911, there arrived in Peking at a time when the financial deadlock was in force, a new figure in Chinese banking circles, who represented what was claimed to be an independent international syndicate. This gentleman was M. de Vos, who had been promoted from the Belgian Consular service to the head of an exceedingly strong financial group. M. de Vos had been Belgian Consul General at Tientsin and afterwards at Kobe, and when home on a vacation he was selected to head the new "independent" group.

The group was composed of the Russo-Asiatic Bank (previously styled the Russo-Chinese Bank), the Sino-Belgian Bank, Banque d'Outremer, Société Générale de Belgique,

Société Belge d'Etude de Chemins de Fer en Chine, Eastern Bank, Limited, J. Henry Schroeder and Co, and A. Spitzer and Co.

It was a significant fact that although the Russo-Asiatic Bank had its own branch and capable financial agent in Peking, the leadership in the new group, in which the Bank was included, was entrusted to a Belgian Consular official. This naturally gave rise to the impression that M. de Vos was in reality a special agent sent to China to work in harmony with the Bank for railway and other concessions and Government business, which the bank itself was prohibited from undertaking owing to the convention with Great Britain defining the Russian sphere as practically north of the Great Wall. Otherwise why should such a group be organized, with the Russian Bank in the leading role, and its negotiations be entrusted to a Belgian Consular official with no previous training as a financier? The work of M. de Vos since he arrived in Peking has, in the mind of critics, fully confirmed the above surmises.

After successfully negotiating a few minor financial transactions he was ready for the real work he was undoubtedly sent to do. The then Premier was badly in need of funds for administrative purposes, and the only available asset left to offer as security for the tottering Manchu Government was the Kalgan railway. The then Acting Minister of Finance had tried to secure a loan for £1,000,000, on the security of the Kalgan line from America. Although this sum represented the entire cost of the line, American bankers would not listen to such a proposition. But the representations of their agent in Peking convinced them that the line was a valuable one, and that the Chinese would only concede this loan to America for fear of its falling into the hands of Russia if the loan were raised in Europe. The American bankers were willing to advance the funds, but were prohibited from so doing by the command of the American Government, who refused to permit the neutrality agreed upon by the Powers to be broken. The American bankers were consequently compelled to retire, but still endeavored to maintain a footing for this loan. The Americans were specially urged by the Chinese to take up the loan on the grounds that it was an established policy of the Chinese Government never to permit the Kalgan line to fall under the influence of any European Power, for fear that Russia might be interested and so secure the control of the much-coveted approach to Peking. Only to America, it was then declared, would the Chinese consent to mortgage this line, and the Americans interested believed the specious and logical arguments adduced, and were prepared to lend the money as soon as the embargo on independent loans was raised by the Powers.

When Yuan Shih-kai was proclaimed provisional President of the Republic and Tang Shao-yi was appointed Premier, one of their first acts was to enter into an agreement with the Quadruple Group for the immediate financing of the country, giving them an exclusive option on all loans. This agreement was in the shape of a letter* signed on March 10, 1912, but the first act of the new Government after that date was to sign a loan for £1,000,000 with the Belgian Group, headed by M. de Vos, giving the Kalgan line as security. The new Government knew that the Americans stood ready to advance this sum, but they deliberately signed the loan and therewith handed over the Kalgan railway as security, forgetful perhaps of the policy of the previous Government in this regard, and ignorant, no doubt, of the close connection of the Belgians with the Russians.

So once again the Belgians scored, and once again the Chinese had to pay dearly for the breach of faith with the Quadruple Group, and incidentally caused the world to lose confidence in the integrity of their most brilliant diplomatic official. If it had not been for the vigorous protest of the Powers, which compelled this "Belgian" loan to be covered by the Reorganisation loan, the Kalgan line would now be effectively mortgaged to Russia under the flimsy disguise of a Belgian loan.

RUSSIA IN THE SEXTUPLE GROUP

When the time came for the negotiation of the Reorganisation Loan, Russia and Japan demanded and received admission into the official Quadruple Financial Group, which then became known as

the Sextuple Group. The new combination arrived at a mutual agreement amongst themselves as to the division of future business in China, and the names of all the Banks constituting the various Groups were then set forth in that document.* The Russian Bank signed the Inter Group Agreement, acting for the following parties, known as the Russian Group. These names should be carefully noted, as they fully corroborate the fact that the Belgians are in reality acting in China on behalf of Russia, and that M. de Vos, in his capacity as the head of a Belgian syndicate, must likewise be regarded as an agent of Russia, although engaged professionally as a Belgian financier. The names of the Russian Group are:

BANQUE RUSSO-ASIATIQUE

A. SPITZER & COMPANY

J. HENRY SCHROEDER & COMPANY

EASTERN BANK, LIMITED

BANQUE SINO-BELGE

SOCIÉTÉ BELGE D'ETUDE DE CHEMINS DE FER EN CHINE

SOCIÉTÉ GÉNÉRALE DE BELGIQUE

BANQUE D'OUTREMER (BELGIAN)

Or, in other words, this is the identical Group for which M. de Vos had been acting up to the time the Russians were admitted into the Sextuple Group. With the above names before us, it is well to stop and analyze the composition of the Group before proceeding further.

The Peking-Hankow Railway Concession was signed by the Belgians in the name of the Société Belge d'Etude de Chemins de Fer en Chine, which, according to the French Government Yellow Book of 1900, was a Franco-Belgian syndicate, in which the Belgian share was only 40 per cent. We have seen that the Russo-Chinese Bank (now Russo-Asiatic Bank) was the official Bank in China for the service of the loan during construction, and we now find the suspicions of 1898 openly confirmed, and the Société Belge d'Etude de Chemins de Fer en Chine, is unblushingly a component part of the official Russian Group at the actual moment. This amply proves the part played in 1898 and discloses the real character of the concern.

The Kaifeng-Honan Railway Concession was signed in 1899 in favor of a so-called Belgian syndicate called the Compagnie Générale de Chemins de Fer et de Tramways en Chine. The French Yellow Book for 1900, however, describes this as a Franco-Belgian syndicate, indicating that the French element predominated, and although the actual proportions of the shares are not given it is fair to assume that it was at least half, if not similar to the other concession in which the Belgian interest was officially only 40 per cent., which included the Russian share.

FROM RUSSIA TO THE SEA.

It is a remarkable and significant coincidence that M. de Vos, quietly working in Peking for the advancement of purely Belgian interests, though at the head of what was afterwards admitted as the official Russian Group, should secure the concession for the extension of the Kaifeng-Honan railway on behalf of the Cie Générale de Chemins de Fer et de Tramways en Chine. The original concession only gave the company the right to the extension westwards from Honan to Sianfu, but we find, in the actual loan agreement,† that he not only succeeded in having this extended to Lanchowfu, but also obtained the right for a further extension to Suchow-fu, while to the eastwards the line was continued from Kaifeng to the sea at Haichow.

A little reflection and study of the map should convince one that this is an essentially Russian project, and dovetails into the Great Trans-Asian line which has always been set aside for Russia. As the continuation westwards from Suchowfu must necessarily ultimately connect with Russia's Central Asian system, and constitute a through trunk line from Central Asia to the heart of China and the seacoast, it must have met with the hearty support of Russia.

*See FAR EASTERN REVIEW, March, 1913, for full text of the Inter-Group Agreement.

†See full text of Agreement in the January, 1913, issue of the FAR EASTERN REVIEW.

*See "Revolution Number" of the FAR EASTERN REVIEW, April, 1912.

If Russia denied the right of China to construct the Chinchow-Aigun line under American financiers and British contractors, as constituting a menace to her strategical position on the Amur, would she not have prevented the construction of the line to Lanchow and Suchow if the agreement had been made with any country other than her ally or her agent? That is a fair question.

Everything points to the conclusion that this line was secured by M. de Vos in furtherance of Russia's special interests for the penetration of China from Central Asia, and to give to Russia, when the time comes, the right to a port on the coast of China.

The acquirement by alleged purely Belgian interests of the right to build this railway was one of the greatest victories achieved by Russia under the nose of her opponents, and in the future will have a far reaching effect upon the destinies of China and the position of Great Britain in the Yangtze valley.

Always bearing in mind the desires of Russia for an ice free port, we can now follow more intelligently the course of events since the loan agreement was quietly signed. The ostensible terminus of the line was placed at Haichow, a small port south of Shantung. Every skipper on the China coast knows that a port can only be created at Haichow with the initial expenditure and continuous outlay of huge sums of money, and for all practical purposes it is worthless. But Russia or her agent could not openly seek an outlet into the Yangtze without incurring the displeasure of Great Britain, so the terminus was quietly left at Haichow, and meanwhile work was commenced and surveys made on the line itself.

HOW THE YANGTZE WAS REACHED

We must now divert and turn to another phase of the situation to elucidate how the difficulty of the port was quietly overcome. Some years ago the concession for a line from Tsingkiangpu, on the Grand Canal, to Tungchow, at the mouth of the Yangtze River, was granted by the Central Government to a provincial concern known as the Kiangsu Railway Company, and only a few miles of poorly constructed line had been built out of Tsingkiangpu when the funds were exhausted. All work was consequently stopped and an attempt was made to secure further capital either from the Government or by a foreign loan.

On January 15, 1913, the representative of the Kiangsu Railway Company entered into an agreement with a continental financial agent for a loan of £1,250,000 for the construction and equipment of a line from Tungchow to Tsingkiangpu. The loan agreement was countersigned by the then Minister of Communications, and thus a Government loan, without supervision, was granted for the benefit of a purely private railway. The issue price in the loan agreement was stipulated at 93, but as the financial agent had emphatically stated that he could not give more than 90, it was arranged and provided for in another clause that the difference between the real and fictitious price would be paid back to the Bankers who might take up the loan as a lump sum payment for their services in supervising the construction and equipment of the line. Needless to say no reputable Banker could be found who was ready to sacrifice his reputation by becoming a party to such a palpable attempt to deceive the Chinese public as to the real issue price, and as a consequence the loan could not be negotiated in Europe.

When it was realized that this loan was impossible and that the port of Haichow could not serve as the terminus of a through trunk line, according to Chinese reports, it was quietly arranged to change the terminus of the line to near Tungchow. The Tsingkiangpu-Tungchow line, controlled by the Kiangsu Railway Company, was nationalized, and it was then incorporated as a part of the Lung-Tsung-U-Hai line.

The result of this manoeuvre is that the Belgians have quietly secured a through line from Central Asia to the mouth of the Yangtze River, with a good port which can be developed to accommodate ocean-going steamers.

The British Government was asleep, China was hypnotized, and now they awaken again to find that another clever move has been made and that Belgium has secured for her ally the great object of her dreams, an outlet to a deep warm water port on the Pacific, and one may be excused for conjuring in one's mind a picture of the not distant future when the Russian Bear will be

squatting on the north bank of the Yangtze, near Tungchow, grinning at the discomfited Lion on the other bank at Shanghai, or Woosung, its port, while Chanticleer will crow from any and every eminence available.

THE HWAI RIVER CONSERVANCY LOAN.*

While on the subject of the terminus near Tungchow and the railway to Tsingkiangpu, we may as well devote a few thoughts to another important phase of the situation which has recently arisen in connection with this district. It is well known that the American Red Cross Society, in its great desire to assist China to preserve the lives of the millions of people whose homes are periodically swept away by the floods in the Hwai River District, sent an American engineer to survey and make a report on the best way to prevent such catastrophes in the future.

It is now common knowledge that certain interested Chinese do not want the Americans in the Hwai River district, and rather than accept the aid of the American Red Cross, they would prefer to float a loan for the proposed conservancy works with the Belgians, with whom negotiations have proceeded. As the loan will probably be for £4,000,000, and be secured on the land tax of the district as well as the reclaimed lands, this should give food for thought. Why do these Chinese desire that the Belgians should take up this loan in a district through which their great trunk line passes, and which if effected will give the Belgians or Russians a mortgage on the lands?

If the interest on an American loan should ever be defaulted, and it became necessary for the bankers to take possession, the Americans would only do so as a last resort and then only to secure their interest. But if the loan for this conservancy work were entrusted to the Belgians, who are officially a part of the Russian Group, and who hold the mortgage also on the great trunk line through the heart of the district, and control a port near Tungchow, what would occur if it became necessary to foreclose and take over and administer the security?

Would Russia ever recede from the position?

It begins to look as though the Chinese concerned have also been hypnotized by the Belgians, and that they are unconsciously being led to betray the best interests of their country. The Americans have proposed the Hwai River Conservancy work, and the loan to carry it through, as a purely humanitarian measure, for on the face of it there is no profit to them in such work other than the satisfaction of saving the lives of millions of people and reclaiming to prosperity a large district of China. In view of this, and by virtue of the claims they have to the enterprise as a result of the enormous amount of charity they have lavished on the district in the past it is quite possible that Americans will secure the work, and that at least one plan of the Belgians will miscarry.

BELGIAN REPRESENTATION IN PEKING.

When the Lung-Tsing-U-Hai Loan Agreement was signed by M. de Vos, on behalf of the Cie Générale de Chemins de Fer et de Tramways en Chine, he was particular to state in the agreement that the syndicate was domiciled in Brussels. But there is the evidence of the French Yellow Book that the company is controlled in Paris, and we know that at the time the document was signed, M. de Vos was the head of the Belgian syndicate in the official Russian Group. When the Russians were admitted into the Sextuple Group, and the Agent of the Russo-Asiatic Bank in Peking assumed the leadership of his national organization, the old concern appointed M. de Vos as the representative in Peking of the Sino-Belgian Bank, a subsidiary of the great Société Générale de Belgique.

During the negotiations for the Lung-Tsing-U-Hai railway loan M. de Vos received the active support and assistance of the Belgian Consul-General at Tientsin, M. Disiere, and it is significant that after the loan was signed, the Belgian syndicate, again following the example already created, selected him for the important position of its representative in China, and M. Disiere

* Since this article was written it has been announced that a loan to carry out the Hwai River Conservancy work, has been arranged between China and the American Red Cross Society. Particulars are given elsewhere.

now has his office with M. de Vos in the Sino-Belgian Bank, Peking. Of course this precedent had been set by other countries, who had elevated men from the consular and diplomatic service to represent their national financial institutions in China, as witnessed in the case of Mr. S. F. Mayers, formerly of the British Legation, and now head of the British and Chinese Corporation; Mr. Willard Straight, who left the American Consular service to serve his country through the management of the American Group; Herr Cordes, a graduate from the German Consular service, and others. The fact remains, however, that these men were selected for their special knowledge of the political situation in China and their intimacy with the officials rather than for their previous experience as financiers.

THE TATUNG-CHENG TU LINE

M. de Vos did not rest with his success in the Lung-Tsing-U-Hai loan. His work was only half completed and he had still to secure another line, which would obviously be the other great link for the furtherance of Russia's original dream. He had to work quickly and quietly as President Yuan Shih-kai had confided to Dr. Sun Yat-sen the right to finance and construct the future railways of China. But M. de Vos never consulted Dr. Sun at Shanghai. He remained at Peking and kept quietly at work negotiating with the Peking authorities, whom he knew and understood. The result was that on the 4th of August, last year, he was able to cable to Europe that he had at last secured the concession for the line from Tatungfu, in Shansi, near the Mongolian frontier, through Sianfu to Chengtu, the capital of the province of Szechuan. The Ta-Cheng line the Chinese have called it. It means in Chinese the "Great Achievement," a phrase possessed of considerable irony when regarded from the Russian point of view.

The "Great Achievement" was signed by M. de Vos on behalf of the Société Générale de Belgique, the important Belgian financial institution which is allied with the greater Société Générale of Paris. There can be no doubt of its financial strength, and its position as the leading Belgian Bank, but when we again scan the names of the Banks composing the Official RUSSIAN GROUP, we find the name of the Société Générale de Belgique, with its subsidiaries the Sino-Belgian Bank and the Banque d'Outremer.

If the Société Générale de Belgique is a purely Belgian enterprise, what is its name doing in the Official Russian Group? It is well known that the Société Générale de Paris is largely interested in the Belgian concern of the same name, and if their interest is in the same proportion as similar combinations, and if the Russians have also a share in the loan, it would appear that the legitimate Belgian interest in the "Great Achievement" is again not what we are led to suppose.

The Chinese, perforce, were elated in the belief that they had outwitted the official Banks and brought about the crowning consummation to years of struggle against the financial monopoly. They have secured more and more liberal terms from the Belgians, and the Managing Directors appointed under the loan agreements have absolute power. They can construct the lines almost as they wish. The Belgians, it seems, have been unable to find a proper Engineer-in-Chief for the Lung-Tsing-U-Hai line and the work is progressing under the direction of assistants appointed by the Managing Director. They have brought about the "Great Achievement," and for a time they feel well satisfied with their work.

But the day of reckoning will come. It is coming. And the Chinese officials now in power are beginning to see it. The hand of Russia is as unmistakably shown in the Tatung-Chengtu Agreement, as it is in the absorption of Mongolia and the present struggle for the control of the Inner Strip.

As China is gradually forced to concede Inner Mongolia to the warlike tribes from the North, and the Inner territory comes under the influence of the so-called independent Mongolian Government, Russia will be seen reaching out to reap the reward of her diplomacy, and the Cossack will pace the Great Wall of China as the outpost of her new frontier.

In the hope of doing something to stave off this calamity, which the present rulers of China appear now to recognise as

impending, a Presidential Mandate was issued on January 8 throwing Kalgan, Kweihwachang, Dolonor, Chihfeng, Taonanfu and Lungkow open to foreign trade. It is almost a forlorn hope that the merchants of other nations will be attracted there in sufficient numbers to offset the march southwards of Russia. Russia will persevere, and when the time comes, and the long talked of line from Urga to Kalgan or Kweihwachang is finally built, Russia will find a ready-made connecting link with Peking via Kalgan and across western China from Tatung, whereby she may join hands with her ally in Yunnan; and no Power or combination of Powers in the world can say them nay.

INTERNATIONALISATION OF THE YANGTSZE VALLEY

Aims of the British Government and Interests of British Manufacturers defeated by the Official Organisation

In the preceding columns the unfolding of Russia's designs on China through the agency of the Belgian element in the Russian Financial Group, was fully described. Only one more link now remained to be forged to realize the great dream of Russia for a through trunk line from the North of China to the South in Indo-China. The French railway from Haiphong, the French port of Indo-China, now terminates at Yunnanfu, the capital of the rich Province of Yunnan, and the right to bridge a gap of a few hundred miles between Yunnanfu and Chungking, or Chengtu, the capital of Szechuan, had alone to be secured to permit plans being made for the final consummation of the magnificent scheme. Russia was debarred from openly competing because of her understanding with Britain in the Scott-Muravieff treaty, and Belgium had already done all that she could safely do without arousing suspicion, so the task of completing the scheme of the Allies now devolved upon France, with her powerful financial and political prestige to insure success.

To appreciate fully the actual situation, we must again return to 1898 during the fierce "Battle of Concessions" waged for the control of China through the medium of railways. Great Britain's open policy was to obtain control of the great Yangtsze Valley and the trade routes converging on Hongkong by the way of Canton. To secure this advantage the British obtained from China the concessions for the short lines radiating from Shanghai and Canton, and cemented their hold upon these sections. The Shanghai-Nanking and Tientsin-Yangtsze (Pukow) and Canton-Kowloon concessions were thus secured for British interests. The latter furthermore hoped to control the Yangtsze Valley by railways from Shanghai being continued to envelop the valley to the westward through the principal cities and towns along the northern and southern limits. The idea was thus conceived of extending the Shanghai-Nanking line westwards from Nanking, or rather from Pukow, on the opposite bank of the Yangtsze river, to an indefinite point on the line of the then projected Peking-Hankow railway at Sinyang, thus enclosing the northern half of the valley, while it was hoped to proceed from Shanghai, by way of Hangchow, westwards to Nanchang and Changsha, to encircle the southern portion. The scheme provided for the ultimate extension of the northern—Pukow-Sinyang—line westwards to Chengtu, the capital of the immensely rich and populous province of Szechuan.

The opportunity for demanding these last two concessions soon presented itself. As already referred to, Great Britain's interests demanded that Russia should not invade the Yangtsze Valley, and at all hazards she should defeat any project which would supply the means for Russia on the North to make a union by a line from Peking with her ally on the South. Russia was striving hard through her Belgian agents to obtain control of such a trunk railway, while the British Government was as zealously doing its utmost to defeat the scheme, but, as noted, the Belgians gained the day. The Chinese were hoodwinked and the contract for the Peking-Hankow line went to Belgium after a solemn assurance from the Chinese Government to the then British Minister that no concession admitting Russian participation would receive the Imperial sanction.

The British Government demanded immediate compensation for the slight and affront to its dignity, and China had to

concede the rights for the Shanghai-Hangchow-Ningpo and the Pukow-Sinyang Railways as the penalty.

BIRTH OF THE BRITISH AND CHINESE CORPORATION, LTD.

As a direct result of the situation arising from the keen struggle for railway concessions in 1898 to strengthen the political hold of the European Powers on China, the organization of a purely British company became essential to act as the official instrument for the execution of the concessions extracted from the Chinese Government. Previous to 1898 no serious attempt had been made by the European Powers to secure railway or industrial concessions in China as purely national undertakings in pursuit of political designs, but the unblushing sale of the country's rights to Russia by Li Hung-chang, compelled the other nations to enter the field to protect their own interests.

The leading British financial institution in China (The Hongkong and Shanghai Banking Corporation), having on its Board of Directors the principal partners of the great German trading firms, had up to this time been operating under an agreement* with the official German Banking Syndicate for mutual participation in administrative and railway loans to China. With the sudden change in the situation caused by the Russian advance, and the creation of the "spheres of influence," combined with the keen struggle for railway concessions to develop and strengthen the special interests of the various Powers in their respective spheres, came the urgent demand for the organization of purely national institutions to execute the concessions and maintain the national commercial supremacy in the respective spheres.

The Hongkong and Shanghai Banking Corporation foreseeing the great advantages and profits to be derived as the representative British organization for the railway development of British policy, terminated their working arrangement with the strong official German Syndicate, and on April 4th, 1898, addressed a note† to the British Foreign Office to the following effect:—

31 Lombard Street, London, April 4, 1898.

SIR:—

I have the honour to acquaint you that the arrangement under which this bank hitherto worked with the German Syndicate for the construction of railways in China has been terminated by mutual consent. It is now agreed that the German Syndicate and ourselves shall each work separately.

I may here mention that the German Syndicate, always a powerful combination, has of late consolidated its position very much, and now includes all houses of any importance in Germany. It also enjoys the confidence of and receives the support of the German Government.

In order that British interests may be fully represented, and that we shall be in a better position to cope with the powerful combination now opposed to us in China, the bank has decided to form a strong representative and influential syndicate to deal with the railway construction in China.

The proposed line between Shanghai, Soochow and Nanking will, in the first place, engage our special attention. The line will run through one of the richest and most populous districts in China. It will help to open up the country, and as the line is sure to prove remunerative, it will also stimulate similar enterprises in other directions greatly to the advantage of British trade.

As it is of the utmost importance that the Shanghai-Nanking line should be secured by England, I at once arranged with the well known house, Messrs. Jardine, Matheson & Co., China, who had already been approached by the Chinese on the subject, to enter into negotiations on behalf of the proposed British Syndicate for the construction of the railway.

The formation of our Syndicate will occupy a little time, but immediately after Easter I hope to have the honour of submitting to you the names of the members composing the Syndicate and all other details, which I think will satisfy you as to the representative nature of the combination.

In the meantime, I trust the explanation I have given will warrant you in giving the necessary instructions to Sir Claude MacDonald to give Messrs. Jardine, Matheson & Co. and the bank such support as they may require.

I have, etc.

(Signed) EWEN CAMERON.

*BRITISH AND GERMAN AGREEMENT RE RAILWAY CONSTRUCTION IN CHINA.—Minutes of Meeting held at New Court, St. Swithen's Lane, London, on the 1st and 2nd September, 1898.

THE CLAIM FOR OFFICIAL HONORS.

It is clearly evident from the above communication, that the Hongkong and Shanghai Banking Corporation, and the commercial concern of Jardine, Matheson & Co., combined to organize the representative British Corporation, and solicited the support of the British Government on the strength of its purely British character. As the first step to assuring this official support, the Bank was compelled to terminate its working arrangement with the official German Syndicate, to enable it to enter the field free from an alliance which would have been instantly challenged by other legitimate British concerns.

The British Government, as a result of the above assurances, evidently gave its undivided support to the proposed Corporation as the exclusive financial instrument for the execution of all railway and other concessions extracted from China under diplomatic pressure. The main fact that is clearly established by the above letter, is that the British Corporation was compelled to free itself from its association from the official German Syndicate, before it could consistently assume the responsible position as the trustee for British interests. In view of the subsequent actions of the British Corporation once it had the monopoly of support from its Government, it is curious to understand how any distinction was made as between an alliance with the official German Group and the official French Group.

The severance of relations with the official German Syndicate to secure the official recognition, and the subsequent alliance with the French and Belgians with the full knowledge and support of the British Government, can only be construed as deliberate to eliminate Germans from any association in the construction of railways in China. But something of what was refused to Germany was cordially handed over to France and Belgium, as will be seen later.

Present:—Representing the German Syndicate—M.A. von Hansemann. Representing the British and Chinese Corporation, Ltd.—Mr. W. Keswick. Representing the Hongkong and Shanghai Banking Corporation—Mr. Ewen Cameron, Mr. Julius Brussel.

M. VON HANSEMAN proposed the following:—"It is desirable for the British and German Governments to agree about the sphere of interest of the two countries regarding the railway constructions in China, and to mutually support the interest of either country." This proposal was agreed to.

The following proposal of M. von Hansemann regarding the British and German spheres of interest for applications for Railway Concessions in China, viz.

"1.—British sphere of interest, viz.—The Yangtze Valley, subject to the connection of the Shantung lines to the Yangtze at Chinkiang: the provinces south of the Yangtze; the province of Shansi with connection to the Peking-Hankow line at a point south of Chenting and a connecting line to the Yangtze Valley, crossing the Hoangho Valley.

"2.—German sphere of interest, viz.—"The province of Shantung and the Hoangho Valley with connection to Tientsin and Chengting, or other point of the Peking-Hankow line, in the south with connection to the Yangtze at Chinkiang or Nanking. The Hoangho Valley is understood to be subject to the connecting lines in Shansi forming part of the British sphere of interest, and to the connecting line to the Yangtze Valley, also belonging to the said sphere of interest."

Was agreed to with the following alterations, viz.—"The line from Tientsin to Tsinan, or another point of the northern frontier of the Province of Shantung, and the line from the southern point of the province of Shantung to Chinkiang to be constructed by the Anglo-German Syndicate (meaning the German Syndicate on the one part, and the Hongkong and Shanghai Banking Corporation and the British and Chinese Corporation, Limited, on the other part, in the following manner, viz.—

"1.—The capital for both lines to be raised jointly.

"2.—The line from Tientsin or to Tsinan or another point on the northern frontier of the Province of Shantung to be built and equipped and worked by the German group.

"3.—The line from the southern point of the province of Shantung to Chinkiang to be built and equipped and worked by the English Group.

"4.—On completion the lines to be worked for joint account." So far the minutes of the proceedings of the meetings, and it is further agreed upon that neither the German Group nor the English Group will be bound to construct the lines assigned to their sphere unless the Shantung lines be constructed simultaneously.

Signed London, September 2, 1898.

Approved of and signed by A. VON HANSEMAN, W. KESWICK, EWEN CAMERON, JULIUS BRUSSEL.

†British Blue Book; China (1), 1899, page 4.—Hongkong and Shanghai Banking Corporation to Foreign Office. (Received April 4th, 1898)

The result of the letter of the Manager of the Hongkong and Shanghai Banking Corporation to the Foreign Office was the early organization of the British and Chinese Corporation, Ltd.,* and to this new combination was entrusted the honour of safeguarding and protecting the interests of Great Britain and of securing to British manufacturers the tangible fruits of the Government's diplomatic victories.

The organization being a purely commercial one, and as neither the Bank nor the Commercial firm had any previous experience in railway construction, the usual official departmental system of construction was adopted, as by that means the Corporation could derive a legitimate and continuous profit by acting as the Purchasing Agents in connection with the loans for all materials purchased abroad. Like its prototype, the Crown Agents for the Colonies, in England, it confined its activities to appointing engineers to build the lines, and to supervising the purchase and shipment of materials.

SQUEEZING OUT INDEPENDENT INTERESTS.

With all the concessions secured from China through the pressure of the British Government duly handed over to its charge for execution, the British and Chinese Corporation thus became the official railway organization of its Government in China. With full confidence in its ability to build the lines creditably, and with absolute faith in its patriotism and loyalty to British interests, the British Government extended to the new combination a monopoly of its official support, and discouraged all competition by other responsible British railway builders.

From time to time other British railway constructors endeavored to secure a footing in China, but were compelled to retire after severe financial losses, and leave the field to the undisputed control of the official commercial organisation. Although reputable British contractors, who have successfully constructed thousands of miles of railways in other parts of the world, have at various times offered to build railways for the Chinese Government at lump sum contract prices 25 to 33% under the prevailing costs of departmentally built lines, they have been systematically opposed and driven from the field. The Chinese Government, who had to pay the bills, and who would have profited by having its railways constructed more economically and expeditiously, was forced to sit still and meekly acquiesce in the system. The British and Chinese Corporation, however, once it secured the official concessions, commenced to consolidate its hold on the railway field in China and to eliminate all competition.

Notwithstanding the fact that these railway concessions were given to the British Government as purely British lines, and that the British Government entrusted its national interests to the British and Chinese Corporation, it is on record that on February 1, 1899, the Corporation entered into an agreement† with the American-China Development Company, who, at that time, held the concession for the construction for the Canton-Hankow railway, in which the British and Chinese Corporation agreed to give the Americans a certain participation in the concession for the Canton-Kowloon railway in exchange for a similar participation in the Canton-Hankow line, and, furthermore, the parties agreed to offer to each other a participation of one-half interest in any business thereafter obtained in the Empire of China.

Although this agreement is no longer in force, yet it constituted a precedent which at that time received the sanction of the British Government, and which the British and Chinese Corporation has extended to cover the other concessions entrusted to its care.

In the original concession granted to the Pekin Syndicate, Limited, it was given certain railway rights from the mines in Honan to the nearest navigable water, and the question arose of

constructing a railway from the mines to Pukow, on the Yangtze. The rights of the Pekin Syndicate thus conflicted with the concessions granted to the British and Chinese Corporation (Tientsin-Pukow, and Sinyang-Pukow lines) which had the port of Pukow as their base.

CREATION OF THE CHINESE CENTRAL RAILWAYS, LTD

To avoid conflict and competition the two companies amalgamated their railway rights north of the Yangtze river under the style of the Chinese Central Railways, Limited,* in the organisation of which the British and Chinese Corporation secured the controlling interest. As subsequent events have disclosed the official British Corporation made their first mis-step by this amalgamation, for although the Pekin Syndicate, Limited,† is registered as a British Company, a large percentage of its shares are held in France and Belgium, carrying representation on the Board of Directors. The British and Chinese Corporation thus shared their interest in two live and valuable concessions in exchange for the elimination of the claim of the other syndicate to a line terminating within its sphere of activity. Competition with its main business was, however, thereby defeated, and the official Corporation was ostensibly left in command of the railway situation north of the Yangtze.

The British objective, as already stated, was to secure an extension of the Pukow-Sinyang line to Chengtu, in Szechuan, and the continued efforts of the Legation and the Company were concentrated in persuading the Chinese to cede the right. At the same time a group of French and Belgian capitalists, headed by the Banque de l'Indo-Chine, were also deeply interested in securing the concession for a line from the Hankow-Sinyang district westwards to Chengtu, and were bringing political pressure to bear on the Chinese Government for this purpose.

Two American syndicates had previously entered the field for the same concession and the then American Minister (Mr. Conger) at Peking approached the Chinese Government on their behalf as soon as it became known that a French combination was active. The Waiwupu in its perplexity between the claims of the various syndicates compromised by promising the American Minister in writing that if foreign capital became necessary for the construction of the line, preference would be given to Americans and British, who were the first applicants.

Dangerous competition thus entered the field to wrest from the British Corporation the right for this exceptionally valuable commercial and essential British political line and to avoid any possible interference with its commercial plans, and apparently disregarding of national considerations, the British Corporation entered into an agreement with the group of French capitalists and absorbed them by surrendering a large share of the

*The Chinese Central Railway Company, Limited was registered on January 7, 1904. The authorised capital is £101,000 in shares of £1, £100,000 being in ordinary shares and £1,000 in deferred shares, and the whole amount has been subscribed, and £41,000 paid up, the ordinary shares having 8s. called, and the deferred shares being fully paid. The deferred shares are entitled to receive half the profits of each year (which the directors may determine to divide) after the holders of the ordinary shares for the time being issued shall have received in dividends a sum equal to the amount paid up thereon, and upon any return of capital in a winding-up or otherwise the deferred shares are to be entitled to participate pari passu with the ordinary shares for the time being issued until the full amounts of the capital paid up on both classes of shares shall have been returned, and thereafter the deferred shares are to be entitled to have divided amongst them one-half of any surplus assets. Voting power, one vote for every ordinary share, and 100 votes for each deferred share.

†The Pekin Syndicate, Limited, was registered on March 17, 1897, for the purpose of obtaining and developing concessions for mining, railway, and other undertakings in China. In May, 1898, the syndicate acquired the sole right for sixty years to open and work coal and iron mines and petroleum deposits throughout certain specified districts in the province of Shansi, China, covering an area of approximately 20,000 square miles, and shortly afterwards a contract on similar terms was signed covering all that part of the province of Honan which lies to the north of the Yellow River. Certain railway rights were given under the concessions. The Chinese government is to receive a royalty of 5 per cent. on the prime cost of all minerals extracted; and of the net profits, after providing for 6 per cent. interest on capital employed, and setting aside 10 per cent. of the profits as a sinking fund the Chinese government is to receive 25 per cent.

*The British and Chinese Corporation was registered on May 24, 1898, to carry on in China or elsewhere the business of contractors for public works, etc. The authorised capital is £250,000 in shares of £100, all of which has been subscribed, and £125,000 or £50 per share, called up. The accounts are made up annually to June 30, and submitted in November.

†The agreement appears in the British Parliamentary Bluebook, China, No. 1 (1899, page 325.)

national rights in the Pukow-Sinyang line which were entrusted to their charge for safeguarding.

THE 1905 AGREEMENT AND MONOPOLY

As this agreement* has materially modified the position of Great Britain in the Yangtze Valley a brief synopsis of its principal clauses should prove illuminating. It was signed between Carl Meyer, of London, on behalf of a British Group consisting of the British and Chinese Corporation, Limited, the Pekin Syndicate, Limited, and the Yangtze Valley Company†; and by Stanislas Simon, representing a body of French capitalists, consisting of the Banque de l'Indo-Chine, the Comptoir National de Escompte de Paris, the Société Générale, the Régie Générale de Chemin de Fer, and Messieurs N. J. and S. Bardac, and by the Chinese Central Railways, Limited.

The object of the agreement was to form a new combination for the monopoly of railway construction in the Yangtze Valley, especially as concerned the Pukow-Sinyang and Sinyang-Chengtou railways. The essential feature of the agreement was to combine for the purpose of opposing and defeating all competition with the new Company in their plans for the construction of Chinese railways.

In the distribution of the 100,000 shares of the new Company, the French were to allot 7,500 shares out of their 50,000 to a Belgian Group, or the Compagnie Internationale d'Orient, and the Belgian Group were in turn to transfer 2,500 of these shares to the British Yangtze Company, Limited; the British Group were also to allot 5,000 of their shares to the Belgian Group, and a further 7,500 shares to an approved American Group, and, in the event of the Americans not participating the final allotment of the shares would be 45,000 to the French, 45,000 to the British, and 10,000 to the Belgians.

The object of the agreement as set forth in the document is, in part, as follows, "and whereas the Chinese Central Railways, Limited, is at present entitled to the benefit of two agreements for railways to be constructed from Pukow to Tientsin, and from Pukow to Sinyang, and whereas the Company has been negotiating for some time past to obtain a concession and other rights in connection with a railway from the Hankow-Sinyang district to Chengtu and the French Group have been for some time negotiating to secure a concession for a railway from Hankow to Chengtu and have come into competition with each other, and for putting an end for such competition the Company and French Group agree to associate themselves in the manner and on the terms appearing."

Article 8 of the agreement provides that "The engineers and other Europeans engaged upon the said railway from Pukow to Chengtu, and of each railway that may be formed or controlled by the Company (other than the railway from Pukow to Tientsin) shall, so far as possible, be in equal proportions of British and French nationalities, and all orders for materials and rolling stock and plant and all contracts for construction of said

railways (other than aforesaid) shall be divided in equal proportions between British and French manufacturers and contractors."

Article 11 says: "*The British and French Groups shall respectively agree that so long as they hold any share in the company respectively they will respectively use their best endeavors to oppose and defeat any schemes competing with the Company's main business.*"

The above agreement, then, discloses that whereas the administrative control remains in the hands of the Chinese Central Railways, Limited, the financial control passed to the French and Belgian bankers.

FRENCH AND BELGIAN CONTROL OF A BRITISH COMPANY

In the amalgamation of the Pekin Syndicate with the British and Chinese Corporation for their railway rights north of the Yangtze River, the official organisation contributed as its assets two *bona fide* acknowledged railway concessions (the Tientsin-Pukow and the Sinyang-Pukow lines) and naturally secured the controlling interest of 60 per cent. of the stock of the original Chinese Central Railways, Ltd. The Pekin Syndicate, whose only asset was an indefinite claim for a line from the mines to deep water at Pukow, secured only 40 per cent. of the shares of the company. The exact proportion of the shares of the Pekin Syndicate, Ltd., held in France and Belgium, can only be ascertained correctly by reference to the books of the syndicate itself, but it is generally accepted that the French hold the controlling interest, and the Editor of the *Peking Gazette* recently made the statement, which has passed unchallenged, that the French interest in the Pekin Syndicate was 90 per cent. If only 50 per cent. is accepted as the French participation it is sufficient for the point we desire to accentuate. In the last Annual Report* of the Syndicate, published in December, the Directors publicly state that the Syndicate participates as to about 20 per cent. in the Chinese Central Railways, Ltd., which is their proportion of the shares allotted under the 1905 Agreement. This document allots 55 per cent. of the shares to the French and Belgians. If we add to this the proportion of French holdings in the Pekin Syndicate, or, say, 50 per cent., and the Syndicate has a 20 per cent. share in the Chinese Central Railways, Ltd., it is quite clear that the actual position of the French and Belgians in this British Official institution would be 65 per cent., or if the Editor of the *Peking Gazette* is sure of his facts, it would be increased to about by 3 per cent.

In other words, the Chinese Central Railways, Limited, which poses as the official British institution in the Tientsin-Pukow and the Pukow-Sinyang Railways, is no longer a British company except in name only, and proves irrefutably that the great British Government is being utilized as the catspaw of international finance to force through French and Belgian interests in China.

CHINA IN A FALSE POSITION

The change in the status of the Company was kept a profound secret, for no copy of the agreement was ever filed with the Chinese Government, who was most vitally interested, nor was it published. It is difficult to believe, too, that the British Government could consistently recognise or condone the stipulations of the agreement and preserve "face" with the Chinese, for we find that the official British Corporation deliberately handed over fifty-five per cent. in this purely British undertaking to the very interests to which China had granted the Peking-Hankow concession in 1898, and for which act she was penalised.

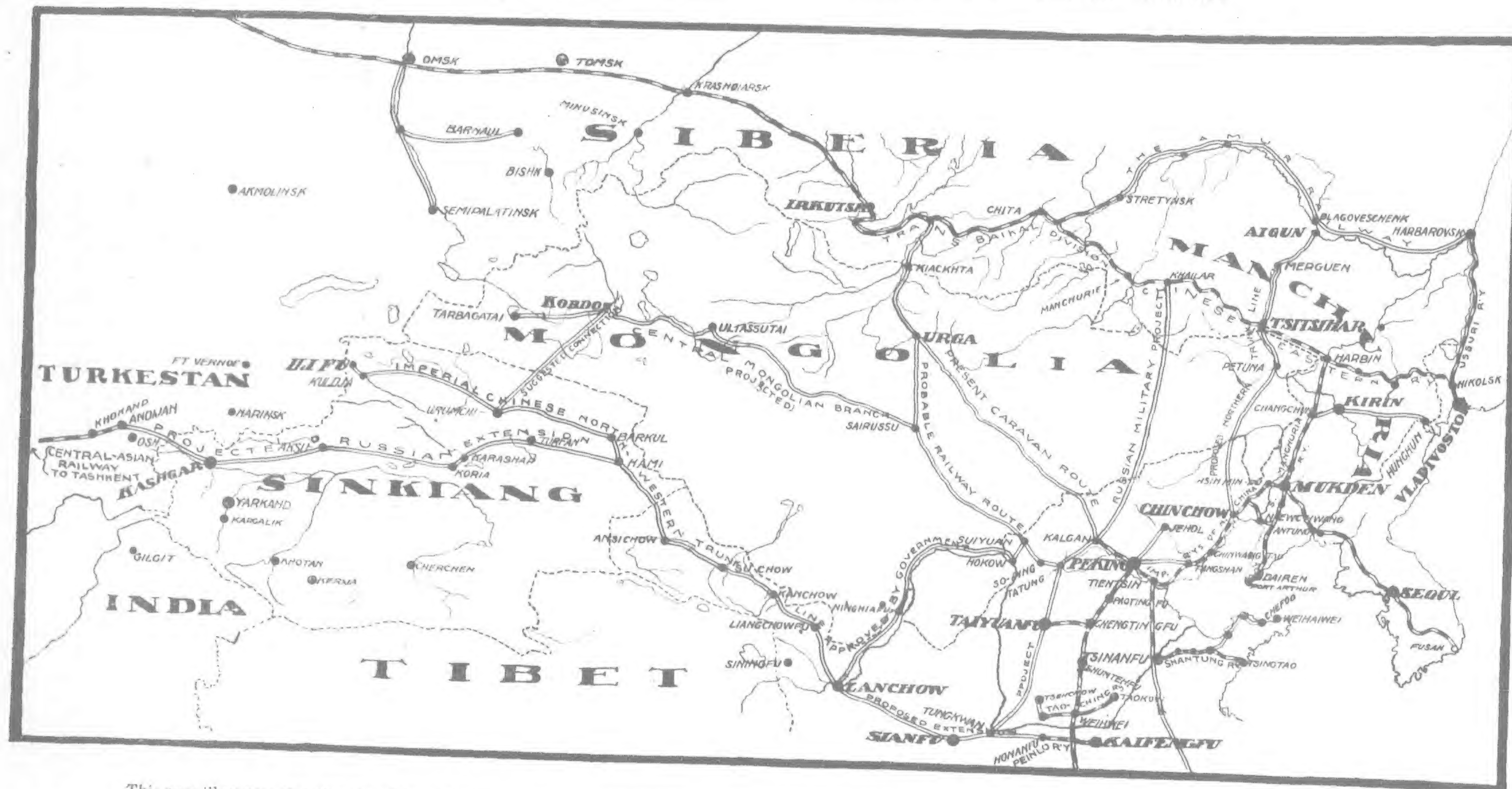
China was punished by Britain for granting this concession to Belgium and we know that on the authority of the French Yellow Book 60 per cent. of the Peking-Hankow syndicate shares were owned in France, yet the British official Corporation, after they had been paid the fine wrung from China, complacently divided the spoils with the French and Belgians. Was it a wilful insult to China or a simple betrayal of the national interests entrusted to their care?

*The report of the Pekin Syndicate is published on page 310.

*The agreement is reprinted on page 305

†The Yangtze Valley Co., Ltd. was registered on December 28, 1900, in amalgamation of the Yangtze Valley Syndicate, Ltd., registered on May 27, 1899 and the Upper Yangtze Syndicate, Ltd., registered on June 27, 1899, to deal with properties and concessions in China. The authorised capital is £500,000, £200,000 being in priority shares of £1, £200,775 in ordinary shares of £1, and £225 in deferred shares of 1s. The priority shares are entitled to receive out of the first profits of the company dividends amounting in all to 100 per cent., and when such dividend shall have been paid all distinction between the priority and ordinary shares is to cease, and the net profits are then to be divided—50 per cent. amongst the ordinary shares, 40 per cent. amongst the deferred shares, and 10 per cent. amongst the directors. Only seven of the ordinary shares have been issued; of the priority capital £96,150 has been subscribed and paid up, and all the deferred shares have been fully paid. The company holds 96,800 fully-paid shares of £1 in the Electric Traction Company of Hongkong, Limited; 1,710 fully-paid shares of £1 in the Association General, Limited (the pioneer of the Singapore Electric Tramways, Limited); 2,500 ordinary shares of £1 (8s. paid), and 20 fully-paid deferred shares of £1 in the Chinese Central Railways, Limited; a one-fourth interest in the Province of Yunnan concession, held by the Syndicat du Yunnan, Limited; 5,000 ordinary shares of £1 (5s. paid), and 730 deferred shares of £1 fully paid in the Nippon Syndicate, Limited; and 2,000 ordinary shares of £5 (£1 5s. paid), and 250 deferred shares of 1s. (fully paid) in the British and Japanese Finance Corporation, Limited).

MAP SHOWING CHINA'S PRE-REVOLUTION RAILWAY PROGRAMME IN MONGOLIA AND SINKIANG



This map illustrates the plan the Chinese Government had in view in 1910 to counter the march of Russia through China. At that period there was considerable activity shown in certain circles to obtain the concession for the line through Sinkiang and Kansu into China—along the route now followed, in fact, by the Lung-Tsing-U-Hai Railway. The Chinese Government then talked of building a line with Chinese capital from Ili-fu to Lanchow, with an extension to Honan-fu, and with a line running from Lanchow north-eastwards to Hokow, on the Yellow River, where it would connect with the Kalgan extension, which is now being built. Likewise they projected the line from Tatung, south-west of Kalgan, southwards to Tungkwan to the south of Shansi province, which is now in the hands of the Belgians. The ideas of the Government of that day, however, have been lost sight of. The revolution altered conditions, and the line from Turkestan to Kaifeng, and from Tungkwan to Tatung, are in the hands of those whom the Chinese of 1910 did not wish to see in control. Comparison of this map (which is reprinted from the FAR EASTERN REVIEW of March, 1910) with the one specially drawn to illustrate the present day situation will be interesting as showing the advance which has been made by the interested Powers since the Revolution.

In view of the facts connected with the granting of the Pukow-Sinyang concession to Great Britain it is clear that the British Corporation surrendered the interests they were selected to safeguard, without due regard to the position of the Chinese Government, or the honor of the British Government. Somebody blundered. And by signing the final Sinyang-Pukow loan agreement in November last with the Chinese Central Railway, Limited, the Chinese Government has again been placed in a false position with respect to the British Government for it has unwittingly been led into a similar position to that in which it found itself in 1898. China becomes a party to another "breach of faith" by signing a contract for a purely British concession with a company whose financial control is vested the French and Belgians.

THE BRITISH GOVERNMENT COMPROMISED.

The essential feature of the agreement entered into between the British and French groups in 1905, was to do all in their power to oppose and defeat all competition with the Company's main business. The Company's main business was the financing and construction of railways in China under the departmental system which provided for the purchasing of materials through the banks acting as Purchasing Agents and receiving a commission of five per cent. for their services.

It is this feature which places the British Government in the most compromising position with its own independent financiers and manufacturers, for the Government, by supporting the agreement, becomes a party to the maintenance of an unjust monopoly fastening on China the most expensive system of railway construction, and obstructing the right of independent British manufacturers or railway contractors to do business with China.

The fact that this monopoly, under the protection of the British Government, was used to defeat all competition has been fully attested to by the experience of independent British manufacturers and contractors who have spent large sums in the useless endeavor to do business in China, and which, on several occasions, has led to official protests against the system.

As it is professedly against the principles of the British Government to discriminate in such matters and uphold a combination in restraint of the rights of other legitimate British enterprises, the existence of the agreement has been carefully concealed. Otherwise those firms who have unsuccessfully tried to conduct business in China would have a legitimate grievance and legal rights to compensation for the losses involved. Leaving these phases of the situation out of the question, however, it is clear that the monopoly did exist, and that the essential features of the Anglo-Franco-Belgian 1905 combination, having the support of the British Government, was to oppose and defeat all competition with the main business of the Company.

Rightly or wrongly the British Government has been made a party to this agreement by its continued support to the Company, thereby creating a precedent contrary to all ideas of a free government.

WHY INDEPENDENT FIRMS COULD NOT DO BUSINESS.

The situation arising out of this monopoly bears an important relation to the organization of independent British engineers to advance their interests in China. In the issue of *THE FAR EASTERN REVIEW* for August, 1911, was published a comprehensive review of the question of supplying Chinese railways with materials, and for special reasons, the article was written on behalf of American manufacturers, although the main argument was equally in support of the independent British manufacturers. It was entitled, "THE VIOLATION OF THE OPEN DOOR BY CHINA, or the reasons why American Manufacturers of Railway Materials could not secure Fair Play in the Awarding of Tenders under the present system of Railway Construction."

Although the 1905 Agreement was in our possession at that time, and we were fully cognizant of all the situations which had arisen as a consequence of the monopoly, we refrained from publishing or quoting it, feeling sure that the British Government was not officially aware of its existence.

We recognized at that time that the independent British manufacturers and their agents in China could never hope to secure free scope to obtain business under a system which delegated to a commercial concern the sole purchasing rights for the materials to be used in the construction of the railways.

In all of the British railway loan agreements with the official group, the departmental system of construction has been rigorously enforced, and the purchasing rights have always been delegated by the Corporation to the commercial firm of Jardine, Matheson & Co., one of its component parts.

As this firm is also the active selling agent for certain British manufacturers of railway material, rightly or wrongly the idea has been created in the minds of their competitors, that they favoured the manufacturers whom they represented.

There are many instances where this is not true, and where the independent firms have secured large orders in direct competition with the firm. It is only fair to state that the position of Jardine, Matheson & Company in this matter is an extremely delicate one, and they are able fully to justify their position. For although this firm acts as Purchasing Agents for the railways under construction, the actual awarding of the tenders has been made by the Managing Director of the lines, and the firm, thus relieved of the responsibility of being the actual purchaser, has at times openly competed for tenders, which were subsequently turned over to them for execution. There may be many fair and reasonable arguments adduced to justify a firm acting as the official purchasing agents for railways secured by the British Government to advance the national interests, in submitting tenders in competition with other firms, but a careful examination of all the points involved, indicates that the attitude is ethically incorrect. By permitting themselves to be placed in this false position, the official British Purchasing Agents have incurred the open hostility and criticism of the independent British manufacturers and their agents, who have failed to secure business in China. Several protests have been made to the British Legation against the operation of this system, but no steps were made to rectify the unfortunate situation until recently when the British Government was compelled by the danger of losing the important railway contract secured by the independent firm of Pauling and Company, and by the "Belgian" successes, to recognise that a change of policy was absolutely compulsory.

Under the terms of the 1905 Agreement, with its essential feature to oppose and defeat all competition with the company's main business, the British Government unfortunately become as party to this method of conducting business, and is open to the severest criticism from the British engineers and manufacturers for the maintenance of an unjust and unholy monopoly.

THE BRITISH ENGINEERS' ASSOCIATION

The failure of the independent British engineering firms to secure a fair share of the railway business in China, led to the organization of the British Engineers' Association. The organizers ascribed the failure of British engineers in China to the operation of American and German diplomacy and their commercial methods, being ignorant of the 1905 Agreement by which their rights had been transferred to France and Belgium, and under which their Government was a party to barring them from the field.

Eastern Engineering in its ignorance of the fundamental facts underlying the situation, rather narrow-mindedly ascribed the failure of British engineers to the machinations of *THE FAR EASTERN REVIEW*, and bitterly condemned us as being anti-British for our open comments on the very facts which gave justification for the formation of the Association. The paper has since carried on a systematic campaign amongst the engineering firms of Great Britain to undermine our position and destroy our usefulness, but if those firms will pause to realise how the Pauling contract, with its great possibilities in the way of sale of railway materials, got to England, and how the policy of the British Government was changed,—which facts *Eastern Engineering* ought to make known,—their eyes will be opened to a true conception of the situation.

With the publication in full in this issue of the 1905 Agreement, the independent engineers can now appreciate the full force of the reasons why they could not secure fair play in the construction of Chinese railways and in the supply of materials, and they will now fully understand the inner reasons which compelled them to organize in order to compete.

If the independent British engineers and contractors have a legitimate grievance, what can be said of the position of the Chinese Government, compelled as it was to submit to and accept the ironclad conditions of the extravagant departmental system of construction forced on it by the Banks and the foreign Governments in order to maintain a monopoly, the chief feature of which is the side profit to the Banks in the shape of the purchasing commission?

The services of the best purchasing agents in Europe or America could be secured on the payment of two per cent. commission. In the division of the five per cent. among the four groups in the Hukuang Railway Loan, one per cent. is set aside to defray the actual cost of conducting the purchasing by the two Agents, while the remaining four per cent. is divided equally between them!

EXCESSIVE COST OF RAILWAY CONSTRUCTION

It is no exaggeration to state that the cost of constructing railways in China under the cumbersome departmental system, has been 25 to 33 per cent. higher than the cost would have been if the construction had been entrusted to experienced and reputable railway contracting concerns. But the construction of railways in China under contract, with experienced builders, would terminate the rich and profitable departmental system, with its tidy five per cent. purchasing commission for the commercial end of the official organizations and thus interfere in its main business. So to preserve the system, and prevent the Chinese Government from ever realizing the truth by the admission of contractors to the field, the entire power and influence of the official groups has been brought to bear in opposition to their entrance.

When the British and Chinese Corporation was first organized in 1898, the leading firm of British railway contractors was admitted as a shareholder and an agreement was reached whereby the firm would construct under contract the Shanghai-Nanking line. The commercial element in the Corporation was, however, able to prevent the construction of the line by contract, and carried on the work departmentally. The construction cost of the line was £11,000 per mile. It may be said, however, that the average cost of constructing railways in China under the departmental system is about £9,000 per mile over ordinary country. There are no figures for contract work, except the cost of the Peking Syndicate Railway (the Tao-Ching line) which was constructed under contract by the great British firm of engineers, Messrs. Pearson & Sons, and which exists to-day as one of the best built lines in the country. The actual cost of the line was under £7,000 per mile, which included the contractor's profit. This is £2,000 under the average cost of departmental built lines and £4,000 per mile cheaper than the Shanghai-Nanking railway. And for the purposes of Chinese traffic the Tao-Ching line meets the requirements of the country as well as the more expensive line.

Messrs. Pauling & Company, Limited, the greatest firm of railway builders in the world, signed a contract with the Chinese Government to construct and equip the Chinchow-Aigun Railway to the same specification as the Peking-Mukden line at a lump sum cost of £7,885 per mile. This provided for their profit, which indicates that the actual cost of the line would be about £7,000, or perhaps less. This corresponds with the actual cost determined by Messrs. Pearson & Sons on the Tao-Ching construction, and corroborates the argument of the lower cost when the work is carried out by experienced railway builders with an efficient organization to carry on the work.

Messrs. Pauling & Company also tendered for the construction and equipment of the Anhwei Railways for Lord Li Ching-fang, at a lump sum cost of £6,200 per mile, also to the same specification as the Peking-Mukden line, thus again indicating that the actual construction cost would have been under £6,000.

This company furthermore approached H.E. Chang Chih-tung and offered to construct and equip the Canton-Hankow Railway to the same specification as the Shanghai-Nanking line for a lump sum of £8,000 per mile, indicating again that the actual cost would have been about £7,000 per mile, or £4,000 less than the Shanghai-Nanking line constructed under the departmental system.

STIFLING OF FREE COMPETITION.

These figures speak for themselves. They are official and on file in the records of the Chinese Government. They have been made by the most experienced British railway builders, whose names are a guarantee that the lines would be well constructed and so serve as an ample security for the bondholders. And yet, for fifteen years, with these figures staring them in the face—figures which must have convinced the most sceptical of the excessive charges of the departmental system—the official group has been able to hypnotize the British Government into opposing the entrance of the leading British contractors in the Chinese railway field. Both Messrs. Pauling & Co., Ltd., and Messrs. Pearson and Sons enjoy the reputation of being the most experienced railway and engineering contractors in the world, and the former concern alone has successfully constructed under the contract system thousands of miles of railways in different parts of the world to the entire satisfaction of the Governments and the Banks concerned. They constructed over 2,500 miles of railways for the Rhodesian Government alone. Yet with this magnificent record this British firm was never permitted seriously to compete with the official organization in China, until the representative of Dr. Sun Yat-sen negotiated a contract with them direct in London, and which was eventually signed in Shanghai without the interference of the British authorities or the knowledge of the official organization.

So for fifteen years China has been debarred from her legitimate right of free competition in the construction of her railways, and compelled to pay millions in tribute to a system whose only excuse for existence was the support of the various foreign Governments to the Banks who had inaugurated the purchasing commission to increase their profits without due regard for the interests or welfare of China, who had willy-nilly to pay the bills.

With the above exposition of the facts surrounding this phase of the matter, we may now return to a further consideration of the operations of the official syndicate.

THE PUKOW-SINYANG AGREEMENT

For several months past the British Legation has been urging the Chinese to comply with their obligations and give effect to the preliminary agreement for the Pukow-Sinyang Concession signed in 1898, and, on November 14 last, the final agreement was duly signed by the Ministers of Communications and Finance for the Chinese Government of the one part and by the representative of the Chinese Central Railways, Limited, of the other. It has taken about 15 years to get this through, and British interests were highly elated at the ultimate success of the long-drawn out Yangtze concession.

The final Pukow-Sinyang agreement was signed as a purely British undertaking, providing for the appointment of British engineers and the purchase of the materials from Great Britain.

Even the French were happy. They were joyous and heartily congratulated the British on their success, for were they not equally interested, and, with the Belgians, did not 55% of the profits pass into their coffers? *Vive l'entente cordiale!* It was only another happy illustration of the friendly, sympathetic co-operation of international finance. This jubilation on the other side of the Channel came, however, as a sort of surprise to interested sections in Great Britain who could not account for such unseemly joy, and refused to understand how the French could be so deeply interested in what had always been held as the crowning triumph of Britain in the Yangtze Valley.

Who had blundered? The representative of the Chinese Central Railways in Peking, who should have remembered the agreement under which his Company was operating, had apparently forgotten all about its existence, and, in negotiating the final Pukow-Sinyang contract with the Chinese,

had overlooked the fact that the French had equal rights to the appointment of engineers and in the supply of materials. Of course, this was only a trivial oversight, readily adjusted among friends, but one which would be difficult of explanation to the British public and the British manufacturers when half the orders for materials were placed in France and French engineers appeared on the line.

The French insist on adhering to the terms of the 1905 agreement, but the British Government cannot publicly admit that after exacting the penalty from China it had turned round and divided it with France and Belgium. The only honorable course to pursue would be to cancel the concession rather than suffer the loss of prestige involved in recognition of such a doubtful transaction.

ON THE HORNS OF A DILEMMA

The British Government is placed in the position of being false to China; of having to incur the displeasure of France, and of antagonising its own manufacturers. Notwithstanding all the pronouncements of British policy in China, the careful delimitation of the Yangtze Valley as a special British preserve, and the erection of a ringed fence to keep trespassers out, the gate had been deliberately unlocked by the guardians, and the French and Belgians, with their Russian partner, were secretly admitted within the sacred precincts, and quickly became busily engaged in garnering the rich and choice financial plums from the Celestial orchard.

The Pukow-Sinyang agreement of November last, which compelled the disclosure of the secret 1905 contract, determined the British that their frolicsome and adventurous French and Belgian play-fellows must be induced to vacate the garden of Eden before all the ripe fruit was plucked from the trees and before the facts became known to the British public.

While all this was going on and the British were apparently justly indignant to find their adventurous rivals inside the fence, and while they were seriously devising schemes to get them out, another gleeful and vivacious claimant for concessions gambolled into the Valley—aided this time by its Celestial sweetheart—sat down under the shade of the two trees bearing the largest and most juicy fruit, and notified the others that it had decided to take what it could as its share. This daring and impudent intruder introduced himself as M. le Banque Industrielle de Chine, s'il vous plait! domiciled in Paris, where he had contracted a left-handed marriage with a Chinese affinity, who had graciously presented him with these special trees as a wedding present.

This sublime audacity staggered the British, as one of these special trees flourished at Hankow while the other grew within the confines of Pukow, the great future port for the lower Yangtze, the terminus of the Tientsin-Pukow, and the Sinyang-Pukow lines, and the stepping off place to the Shanghai-Nanking line; or in other words, the most sacred spot marked out by the official British Company (the Chinese Central Railways, Limited) as its special sphere of activity.

The agent of the Chinese Central Railways, Limited, exploded when he was informed of this invasion into the holy of holies, and forthwith protested against the impudence of the unwelcome financial roisterer who had secured possession by a secret loan for the development of the ports of Pukow and Hankow. The two great centres of Britain's sphere had therefore been appropriated by M. le Banque Industrielle de Chine, under their very noses. This was too much. French trespassers must be taught a lesson. They must be cajoled to run away and play somewhere else or be ejected, but it would appear that the intruder possesses some claim to a share within the ringed fence, for it is an offspring of one of the great syndicates comprising what is known as the Chinese Central Railways, Limited, which, as has been previously explained, owes its origin to the amalgamation of the British and Chinese Corporation with the Pekin Syndicate, Limited. The latter, although a thoroughly respectable British registered concern, has, as already explained, most decided French and Belgian proclivities, which may account for the unusual readiness of the Chinese Central Railways, Limited, to enter into the 1905 compact.

THE BANQUE INDUSTRIELLE DE CHINE

The Banque Industrielle de Chine came into existence during the month of January, 1913, when the French promoters secured the co-operation of the Chinese Government by admitting the Chinese to a one-third interest, and during the first week in June last the shares were offered to the public in London and Paris. The capital was francs 45,000,000, divided into 87,000 ordinary shares of francs 500 each, with 3,000 founder's shares of francs 500 each. The significant feature of the prospectus issued to the public was the fact that 40,036 ordinary shares were reserved for subscription at par for the shareholders of the Pekin Syndicate, Limited, and two directors of the Syndicate were the promoters of the bank. We find on analysis that the distribution of the shares would be about as follows, if the prospectus preference was taken up.

Chinese Government, one-third	29,000
*Pekin Syndicate shareholders	40,036
Public subscription	17,964
Total	87,000

These figures would indicate that the actual control of the bank is, or could have been, in the hands of the shareholders of the Pekin Syndicate, a strictly British officially registered organisation, which in this new concern, transferred its allegiance under French Company laws. And it also discloses that the Pekin Syndicate, Limited, one of the official custodians of British rights in the Yangtze Valley, deliberately participated in the organisation of a bank under the laws of France, the first transaction of which was to steal away the rights entrusted to its care by the British Government. Was there ever such a pitiful picture of financial intrigue and deceit?

The sublimely ridiculous picture is also presented of the British agent of the Chinese Central Railways, Limited, protesting in virtuous indignation against the trespass on the preserves of his company by the loan signed for the re-building of Hankow, and the construction of a port at Pukow by the French Banque Industrielle de Chine, a subsidiary of one of his own principals. *And the British Government protests against China for attempting to internationalise the Yangtze Valley, when in reality China was but following the path laid by the British official organisation when it shared the British concession for the Pukow-Sinyang railway with French and Belgian interests and thereby itself internationalised what the British Government believed to be its particular sphere.*

POSSIBLE FRENCH REPRISAL

In the meanwhile, nettled at the hesitancy to comply with the honest provisions of the 1905 compact, the French, with the innate sagacity of the nation, are not awaiting quietly the final shove that will oust them from their share of the concession. They are showing no outward signs of displeasure against the wave of patriotic British sentiment to hold the Yangtze Valley as a British preserve. No, China is extensive and wealthy in resources, and there are other quiet corners where valuable rights can be acquired simply by asking the Chinese Government for them. And the Chinese are just waiting to be asked.

Now it happens that the British and French Government have a mutual understanding to share equally in any railway construction in the provinces of Yunnan and Szechuan, though it is not clear whether or not this understanding extends to the French interests in the Szechuan section of the Tatung-Chengtou line, recently granted to the Société Générale de Belgique. It would be interesting to know.

In the great through western trunk line which will connect Russia on the north and Yunnan on the south the line from Yunnanfu to Chengtu or Chungking had still to be provided for. What is more natural than that the French Government at this psychological moment should kindly request the Chinese for the right to construct the line from Yunnanfu to Szechuan well knowing that the friendly officials could not say them nay? And what is more natural, after securing this choice section from China, than that the French Government should politely convey

*See report of the Pekin Syndicate on page 310 of this issue.

its compliments to the British Government and add that it could have the Pukow-Sinyang line to itself, while the French, in view of the hesitancy of the British to acknowledge their rights under the 1905 agreement, were consequently reluctant to admit the British to a half share in the Yunnan-Chungking or Chengtu line, and would therefore construct the railway without their assistance?

A brilliant stroke of diplomacy! France would gain for the loss of her share in the Pukow-Sinyang line the sole rights to a through railway from Haiphong to Chungking or Chengtu, or both. At Chengtu she would link up with the "Great Achievement" of the Russo-Belgian combination, thus clasping hands across China with her ally on the north, and also would have the control of a large section of the line eastwards to the Hupeh border as provided for in the Paris meetings of the Hukuang negotiations—a section which is shortly to be proceeded with, as reported elsewhere.

Once this last link is in her control France will dominate the entire west of China and divert all the trade to her port of Haiphong. The line from Yunnan to Nanning, which has already been promised to her by the kindly Chinese, will then be shelved and never be built, so that control of the west will not pass from her hands.

This situation, so disastrous to China, has been brought about by the failure of the official British Group to recognise the rights of the French in the Pukow-Sinyang loan agreement. It is a situation fraught with the greatest danger to China. The granting of the Yunnan-Chungking or Chengtu line as an exclusive French concession would constitute the last nail in China's coffin. The coffin is prepared, the corpse enclosed, and the undertaker stands ready, hammer in hand, to drive the nail home.

The French Minister, while this article was being written, actually secured from China the right to construct the Yunnan-Szechuan railway for French interests.

The Chinese, as usual, have been compelled to bow to the inevitable, and Great Britain has received a severe set-back from France, solely as a result of the grasping aspirations of the Official British Group. In November of last year an Anglo-French syndicate, represented in Peking by a British subject, endeavored to obtain the right to build the Yunnan-Chungking or Chengtu railway, and, by virtue of the combination of French and British interests and the agreement existing between the two Governments to share railway enterprises in Yunnan and Szechuan, stood an excellent chance of receiving the full support of the French Minister. In fact we are not wrong in saying that support was promised by the French Minister, but he was compelled to modify his attitude immediately upon the signing of the Pukow-Sinyang agreement on November 14 last and the consequent development of the situation created by the official British organisation. The deliberate disregard of French claims in the Pukow-Sinyang agreement compelled the French Minister to act promptly, and immediately he began to look after the interests of an organisation more French than British. So rapidly did things move, indeed, that the Anglo-French Syndicate was completely side-tracked, and, by January 21, an option was signed for the Yunnan-Szechuan line—with whom? With that interloper in the Yangtze Valley, the *Banque Industrielle de Chine*! And thus France gave Britain the Roland for her Oliver.

REASONS WHY THE 1905 AGREEMENT STANDS.

In the meantime the 1905 Agreement has been the subject of considerable discussion. It is claimed that in signing the final Pukow-Sinyang Agreement and ignoring the provisions of the 1905 Agreement for the equal participation of the French in the supply of materials and the appointment of engineers, the representative of the Chinese Central Railways, Limited, must have overlooked the most vital essential in the reasons for the agreement. As the final Pukow-Sinyang Agreement was signed with the Chinese Government with the full knowledge of the British Legation, it is also apparent that the existence of the 1905 compact was temporarily forgotten. Such a striking case of official amnesia is all the more extraordinary, inasmuch as it

was only four years ago that the existence of the agreement was officially recalled to the attention of the American Government by the British Foreign Office, to justify the reasons why the American Group should not be permitted to participate in the Triple Hukuang Railway Loan.

The failure of the American Bankers immediately to respond to the rather superior condescension of the British official group in allotting the shares, was construed by the latter as a waiving of the American rights to participation in the Hankow-Szechuan Railway, provided for in a letter written by the Waiwupu in 1904 to the American Minister (Mr. Conger). The 1905 Agreement was then not only officially advanced by the British Government as a fair reason why America should not be admitted to the Hukuang Loan, but it is also on record that when the Agreement was first made, the British Minister at Washington officially recommended the American Government to instruct its bankers to communicate with the Chinese Central Railways, Limited, if they desired participation.

It is also on record that the 1905 Agreement was entered into with the knowledge, and presumably the approval, of the British Government, thus making the Government, beyond the shadow of a doubt, a full party to all that transpired. It is difficult to believe, however, that the British Foreign Office ever gave the matter more than a passing thought, and it is charitable to say it must totally have failed to realize all the points involved in such a transaction.

It has also been urged that the 1905 Agreement was nullified or supplemented by the terms of the Hukuang Loan Agreement, but such a contention can only blind those unacquainted with the true facts. The British Group in the Hukuang Loan, although officially represented by the Hongkong and Shanghai Banking Corporation, consists of the British and Chinese Corporation and the Chinese Central Railways, Limited.

In the distribution of the profits and participation of the British Group in this Loan the following arrangement was finally arrived at:—

Of the total loan of £6,000,000 the portion appertaining to the Hankow-Canton section is £3,000,000 and the portion appertaining to the Hankow-Szechuan section is £3,000,000.

The Chinese Central Railways, Limited, takes no participation in the Hankow-Canton section, the profits of which, whether from flotation or commission on materials, are divisible equally between the British and Chinese Corporation, Limited, the German Group, the French Group, and the American Group.

The British and Chinese Corporation, Limited, and the French Group take no participation in the Hankow-Szechuan section, the profits on which, whether from flotation or commission on materials, are divisible, two-fourths to the Chinese Central Railways, Limited, one-fourth to the German, and one-fourth to the American Groups.

For facility of division it was agreed that the portion of the loan to be floated in London, £750,000, should be deemed to be floated on account of the British and Chinese Corporation, Ltd., and £750,000 on account of the Chinese Central Railways, Ltd.

Of the portion to be floated in Paris by the Banque de l'Indo-Chine £750,000 should be deemed to be on account of the Chinese Central Railways, Ltd.

In the final arrangement for the appointment of the engineers and the purchasing agency rights for the extension of the line to Chengtu, it was arranged that the chief engineer for the first 400 kilometers was to be appointed by the American Group, for the next 600 kilometers by the British Group, and the remaining 600 kilometers by the French Group, and it was also arranged that the purchasing agency rights for the proposed extension would go with the appointment of the chief engineer.

It is thus clearly established that the Chinese Central Railways, Ltd., secured its full participation in the Hukuang Loan from the other parties. The company was honorably and justly dealt with in the division of the profits and its future participation.

Yet, when the time arrived for the combination to repay its obligation, by admitting participation in the Pukow-Sinyang section, the official British company (excepting the Chairman

of the British and Chinese Corporation, who admitted at the annual meeting in London that other nationals had the right to share in the Pukow-Sinyang railway) suffered a mental hiatus and conveniently overlooked that the French partners in the company were entitled to one half the materials and engineers, which stipulation should have been incorporated in the Loan Agreement.

But this action would have revealed the truth to the Chinese Government, which was the last thing that the official corporation desired, so the facts were concealed and the Pukow-Sinyang Loan Agreement was signed as a purely British undertaking.

The signing of this agreement under these circumstances may have appeared quite justifiable to the British official organization, as it had the support of its Government, but the fact that the rights which were wrung from China as a penalty for her signing the Peking-Hankow Loan were afterwards divided with the French, and Belgians did not seem to trouble their conscience.

THE CHINESE GOVERNMENT'S POSITION

But how about the position of the Chinese Government? Under the circumstances was not the Pukow-Sinyang Loan Agreement obtained from the Chinese Government under false pretenses?

Article 23 of the Final Agreement expressly stipulates as follows:—

"The Company may, subject to all its obligations under this agreement, transfer or delegate all or any of its rights, powers and discretions thereunder to any British Company, Directors or Agents with power of further transfer and sub-delegation; such transfer, sub-transfer, delegation or sub-delegation to be subject to the approval of the Director General."

Has the Chinese Government ever been officially informed of this transfer by the 1905 agreement of the British rights to French and Belgian interests? If these rights have been transferred and the status of the company changed, is the Loan Agreement valid? It may be urged that although the large majority of the shares are held in France and Belgium, that the company remains British and its status is not altered.

The American Government advanced this same argument in 1905, and furthermore, guaranteed the American character and status of the American-China Development Company, notwithstanding the fact that the Belgians had secured control of the shares by private purchases in the market. The Belgian controlling interest in the American company was never approved by the American Government, as the British Government approved the transfer of British rights in the 1905 Agreement. The attitude of the American Government at that time did not, however, satisfy the Chinese, who strongly insisted on the cancellation of the concession for this breach of the Agreement.

This view point of the Chinese had, at the time, the moral support of British interests in China, and the British press were loudest in their denunciations of the betrayal of China by the Americans. Every honest thinking American fully concurred in the Chinese attitude, and the American Government was compelled to do justice to China by permitting China to repurchase the right to the concession.

And yet, at the very time that the Hankow-Canton Redemption Loan was being signed with the Hongkong Government, and the British official institution was being made the medium for the loan, the proceeds of which were to be employed in repurchasing the concession from the Americans, the British official group, with all these facts clearly before them, were busily engaged in handing over to the French and Belgians, with the approval of its Government, the controlling interest in a purely British concession.

The date of signing the Hankow-Canton Redemption Loan is not given, but it became effective on October 6th, 1905, thus clearly indicating that it had been drawn up some time in advance. The Agreement in which the British official Group ceded its rights to the French and Belgians was signed on October 2nd, 1905, or four days before the other document became effective.

China is weak and passing through the greatest crisis in her long history. Harried and bullied on all sides by aggressive foreign interests she is struggling to maintain law and order, preserve her integrity and consolidate the authority of the President throughout the country. China is not in a position to demand justice. She cannot approach the British Government at this crisis in her affairs and request fair play. She is in the hands of the official financial institutions, and needs their assistance to tide over the crisis. She cannot antagonize these institutions just now, for they would retaliate in the money market. China can only hope for the justice that is due to her by depending upon that innate sense of fair play and equity characteristic of all true Britons. China looks to Great Britain as her best counsellor, and President Yuan holds Sir John Jordan, the British Minister at Peking, as his most cordial friend. The British position in China has been seriously undermined by the knowledge of the 1905 Agreement, and although no official remonstrance may ever be made, the advance of British interests in the future will hinge largely on the attitude assumed by the British Government in connection with the 1905 Agreement. The good name of the British Government demands some action in this matter. There is only one amende honorable. Will it be made?

THE HUKUANG RAILWAYS

The Chinese Government has concluded an arrangement with the banks of the four Powers (Great Britain, Germany, France and the United States), for the extension of the Hupeh-Szechuan Railway from Kueichowfu, via Chungking, to Chêngtu, involving the construction of over 500 miles of line. The financial arrangements will be equally shared by the four groups, but the French will benefit principally in the matter of construction, as no share of the construction of the system provided for by the Hukuang Agreement was allotted to them. Details have not yet been settled, but it is understood that surveying will be begun forthwith. As regards terms, the banks, of course, require a reversion to those known as the Canton-Kowloon Railway terms, by which the railway itself constitutes the security, together with the usual guarantees relating to expenditure and accountancy.

THE 1905 AGREEMENT

Agreement Between Certain British Corporations, a Group of French Capitalists and Chinese Central Railways, Limited, for the Construction of the Sinyang-Pukow and Hankow-Chengtu Railways

Memorandum of Agreement made the 2nd day of October, 1905, Between Carl Meyer of 4 and 5 King William Street in the City of London on behalf of a body of English capitalists consisting of the British and Chinese Corporation, Limited, the Peking Syndicate, Limited, and the Yangtse Valley Company, Limited (who with their successors and assigns

are hereinafter called the British Group) of the first part, Stanislas Simon, of 15 bis Rue Lafitte, Paris, in the Republic of France on behalf of a body of French capitalists consisting of the Banque de l'Indo-Chine, the Comptoir National d'Escompte de Paris, the Société Générale, the Régie Générale de Chemins de Fer and Messieurs N. J. & S. Bardac (who with

their successors and assigns are hereinafter called the "French Group") of the second part and the Chinese Central Railways, Limited (hereinafter called the "Company") of the third part.

Whereas the Company was registered as a Company with limited liability under the Imperial British Companies Acts 1862 to 1900 on the 7th of January, 1904.

And whereas the said company was formed by two of the parties forming the British Group for the purpose of acquiring and dealing with concessions and other rights in connection with railways in China and elsewhere and for other purposes mentioned in the Memorandum of Association of the Company.

And whereas there have been issued to the British Group 50,000 shares of £1 each on which the sum of 8s. per share has been called and paid up.

And whereas the Company is at present entitled to the benefit of two agreements, short particulars whereof are set forth in the schedule hereto and which refer to railways proposed to be constructed from Pukou to Tientsin and from Pukou to Sinyang respectively.

And whereas the Company has been for some time past negotiating to obtain a concession and other rights in connection with a railway from the Hankow-Sinyang District to Chengtu in the Province of Szechuan and the French Group have been for some time past negotiating to obtain a concession and other rights in connection with a Railway from the Hankow-Sinyang District to Chengtu and they have thereby come into competition with each other.

And whereas for the purpose of putting an end to such competition the Company and the French Group have agreed to associate themselves together in the manner and on the terms hereinafter appearing.

And whereas it is an essential term of the agreement that the British Group and the French Group shall so far as regards matters within the scope of the company's objects do all in their power to oppose and defeat all competition with the Company.

Now these presents witness that **it is hereby agreed** by and between the parties hereto as follows:

1.—The capital of the Company shall be forthwith increased by the creation of 1,000 Deferred Shares of £1 each, which shall be entitled to receive between them one half the surplus profits of each year (which the Directors may determine to divide) after there shall have been paid by way of dividend or bonus to the holders other than the Deferred Shares a sum equal to the nominal amount of such shares and also to rank *pari passu* in any return of capital in a winding-up or otherwise until the full amount paid up on all the shares of the Company for the time being issued shall have been returned and thereafter to receive one half of any surplus assets and on the terms that each deferred share shall upon a poll confer 100 votes in respect thereof upon the holder thereof.

2.—Of the said deferred shares 550 numbered 1 to 550 inclusive shall be forthwith allotted to the British Group and the remaining 450 numbered 551 to 1,000 inclusive shall be issued to the French Group. All the shares so allotted shall be paid up in cash at once.

3.—There shall also be allotted in the proportions below mentioned to the French Group or to persons nominated by them whose pecuniary responsibility shall be undoubted the remaining 50,000 shares of the original share capital and there shall be forthwith called and paid up on each such share the sum of 8s. and all calls thereafter made on the said shares shall be paid in due course. Of the said 50,000 shares 7,500 shall be allotted to the Compagnie Internationale d'Orient or their nominee (hereinafter called the Belgian Group) and 2,500 shares out of such 7,500 shall be transferred or the benefit thereof made over to the Yangtze Valley Company, Limited, on such terms and conditions as the British Group shall think fit. Of the 50,000 shares held by the British Group or their nominees 5,000 have already been transferred to the Belgian Group and in the event of certain American capitalists to be approved of by the British Group (hereinafter referred to as the American Group) agreeing within twelve months from the date hereof as to which time shall be of the essence of the contract to accept such participation but not a smaller one in the Company the British Group shall transfer or make over the benefit of a further 7,500 shares out of their 50,000 shares to the American Group but only upon such terms and conditions as the British Group shall think fit and in the event of the American Group not agreeing within the time aforesaid to participate as aforesaid the British Group shall transfer 2,500 out of the 7,500 shares to the French Group and shall retain the remaining 5,000 for themselves so that in the event of the American Group not participating the said 100,000 shares will be held as to 45,000 by the British Group or their nominees as to 45,000 by the French Group or their nominees and as to 10,000 by the Belgian Group or their nominees. None

of the said 100,000 shares shall save as aforesaid be sold, transferred mortgaged or otherwise dealt with without the consent of the British and French Group for a period of five years from the date hereof and before the transfer of the shares aforesaid to the Belgian and American Groups agreements to the like effect to this Clause shall be entered into by them and by the Belgian Group also relating to the shares already transferred to them as aforesaid.

4.—The number of Directors of the Company shall be increased to 18, of whom 9 shall be from time to time appointed by the holders of the 550 deferred shares number 1 to 550 inclusive or of a majority of them and the remaining 9 shall be from time to time appointed by the holders of the remaining 450 deferred shares numbered 551 to 1,000 inclusive or of a majority of them.

5.—The 9 Directors from time to time appointed by the holders of the said 550 deferred shares shall be appointed a permanent committee of the Board sitting in London and the 9 Directors from time to time appointed by the holders of the said 450 deferred shares shall be appointed a permanent committee of the Board sitting in Paris, but all resolutions of the said Committees in London and Paris shall be subject in all respects to the control of the Board of Directors of the Company and to all resolutions of the Board affirming, disaffirming or otherwise dealing with the same directly or indirectly.

6.—The Chairman of the Board and also any person temporarily appointed to preside in his absence at a meeting of the Board or of the Company shall be a natural born or naturalised British subject and be from time to time elected by the Directors appointed by the holders of the said 550 deferred shares out of the directors appointed by the holders of such shares and such Chairman or other person shall in addition to any votes he may already possess have a casting vote at such meeting of the Board and of the Company. Meetings of the Board shall be held in London or Paris as may be determined by the Board. The General Meetings of the Company shall be held in London. The Chairman of the Paris Committee shall be appointed by the members of such Committee and the Chairman of the London Committee shall be the Chairman of the Board of Directors of the Company.

7.—The French Group shall forthwith on the execution hereof vest in the Company the benefit of all negotiations entered into by or in its behalf in regard to the said concessions and rights in competition with the British Group and all surveys made in connection therewith and shall give to the company all documents and information in its possession relating thereto and the Company shall thereupon repay to the French Group such a sum as in the opinion of the Board of Directors of the Company shall represent the amount of the expenses incurred by the French Group therein and properly attributable thereto.

8.—The Engineers and other European employees engaged upon the said railway from Pukou to Chengtu and of each railway that may be formed or controlled by the Company (other than the said railway from Pukou to Tientsin) shall so far as possible be in equal proportions of British and French nationalities and all orders for material, rolling stock and plant and all contracts for construction of the said railways (other than aforesaid) shall be divided in equal proportions between British and French manufacturers and contractors.

9.—It shall also be an essential term of the contract that no change shall be made in the character or political status of the Company or of any railways formed or controlled by the Company. All concessions and other like rights and privileges obtained by or for the Company shall be taken in the name of the company.

10.—All companies that may be formed by or under the auspices of the Company or in connection with any railways or other concerns in which it is interested shall be Chinese Companies. If that should appear undesirable the said companies shall be of the same character as the Company and similar provisions to these herein contained in relation to the political character and status of the Company shall apply to each company so formed.

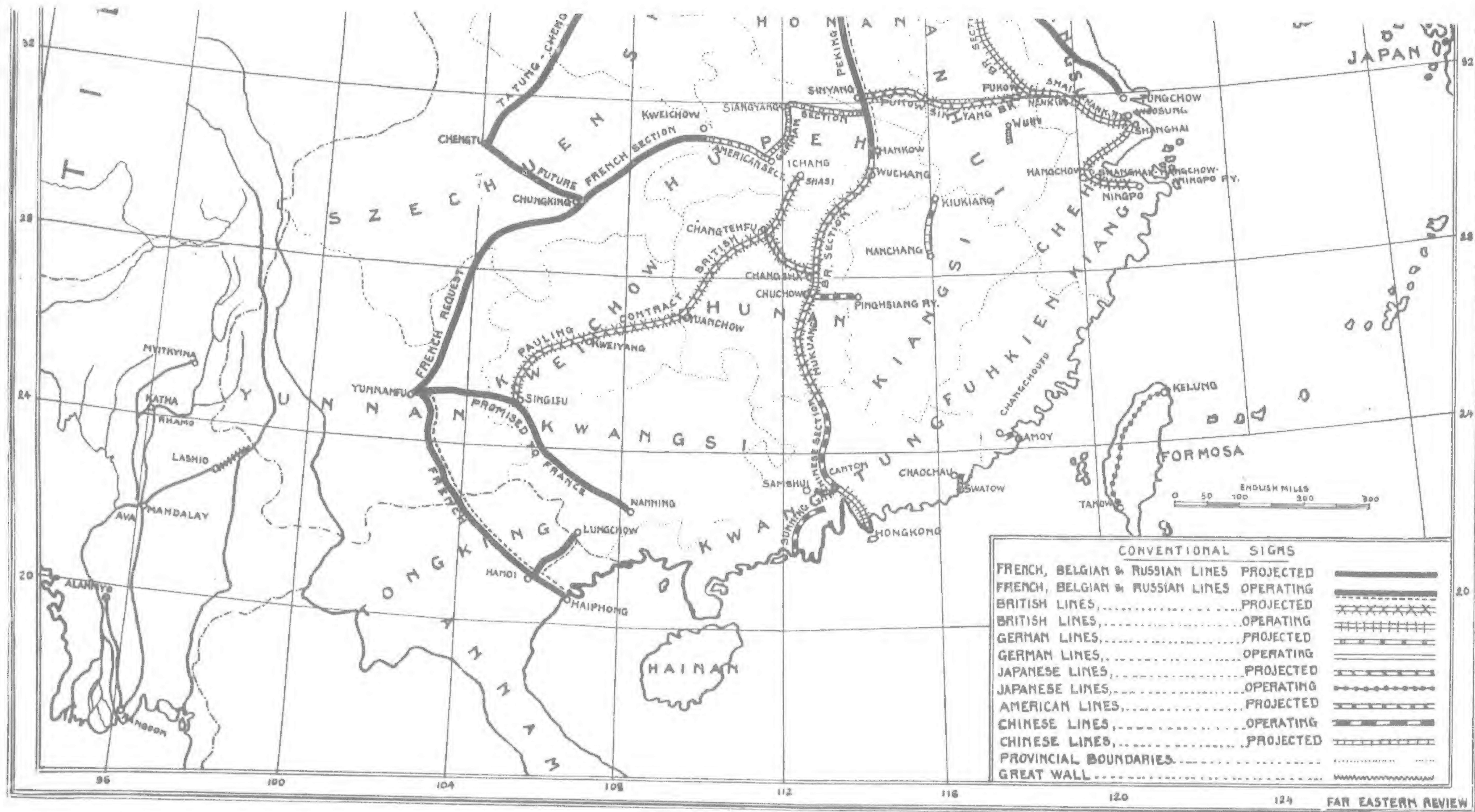
11.—The British and French Groups shall respectively agree that so long as they hold any shares in the Company respectively they will respectively use their best endeavors to oppose and defeat any schemes competing with the Company's main business.

12.—The voting power of the British and French Groups and of their nominees in respect of the shares of the Company for the time being held by them or on their behalf shall be used against and shall not be used in favour of any resolutions which may tend to contravene the provisions of this present contract and the Directors of the Company shall be authorised to disregard all votes given in contravention of this clause.

13.—No shares shall be transferred out of the names of the British, French, Belgian or American Group or their nominees to any companies or

This is a detailed historical map of Manchuria and surrounding regions, including parts of Siberia, Mongolia, and Korea. The map features a coordinate grid with longitude lines from 88°E to 132°E and latitude lines from 36°N to 52°N. Key geographical features include Lake Baikal, Lake Koss-Gol, and the Uliassutai region. Major railway lines are depicted, including the Trans-Siberian Railway, the Amur Railway, the Chinese Eastern Railway, and the proposed Russian line. The map also shows the borders of Manchuria, Mongolia, and Korea, along with various cities and towns. A note in the lower-left corner indicates a connection to Kashgar and the Russian Central Asian line.

TO KASHGAR
TO CONNECT WITH
RUSSIAN CENTRAL
ASIAN LINE



This map shows how far Russia, aided by France and Belgium, has succeeded in her plans for the railway conquest of China. The broad black lines, which are in every way the most conspicuous feature of the map, denote the lines directly or indirectly under Russian influence. The map can hardly be studied understandingly without it becoming manifest that Russia has achieved a great deal of her purpose, and that in all human probability her influence will become predominant in the very regions from which she is supposed to be excluded. Particular attention should be paid to the Lung-Tsing-U-Hai line. Originally this line was to run from Lanchow to Haichow (a thin line on the map shows the railway was originally designed), but now Tungchow on the Yangtze is the terminus. The political importance of this change is clearly set out in the accompanying article.

persons except upon the terms that such companies or persons shall bind themselves by the terms of this agreement and the Board shall refuse to register all transfers made in contravention of this agreement.

14.—The Articles of Association of the Company shall be altered in such manner as to give effect to the provisions of this agreement.

In witness whereof the said parties to these presents have hereunto set their hands the day and year first above written.

THE SCHEDULE ABOVE REFERRED TO:

6th January, 1899.—Preliminary Agreement of this date made between His Excellency, Sheng, Director-General of the Imperial Chinese Railway Administration, acting under the authority of the Tsung-li-Yamen of the one part, and the British firm of Jardine, Matheson & Company for themselves and on behalf of the Hongkong and Shanghai Banking Corporation, of the other part, jointly representing a British syndicate adopting the terms of the Preliminary Agreement signed by the above mentioned contracting parties on the 13th day of May, 1898, for the financing, construction and working of a railway from Shanghai to Nanking as a Preliminary Agreement for the construction and working of a railway from Pukou to Sinyang in the Provinces of Kiangsu, Nganhui and Honan.

18th of May, 1899.—An agreement of this date made between their Excellencies Hsu and Chang duly authorized to act on behalf of the

Imperial Government of China of the one part and (A) The Deutsche Asiatische Bank, (B) the Hongkong and Shanghai Banking Corporation for themselves and on behalf of Messieurs Jardine, Matheson and Co. as joint Agents for the British and Chinese Corporation, Limited, thereafter called "the Syndicate" for the provision jointly by the Deutsche Asiatische Bank and the British and Chinese Corporation of a loan and for the construction and working of a railway from Tientsin to the Yangtzekiang.

(Signed) CARL MEYER.

Witness to the signature of Carl Meyer on behalf of the British Group

WATER HENDERSON,

Sol., 31 Lombard Street, London.

(Signed) S. SIMON.

Witness to the signature of Stanislas Simon on behalf of the French Group

(Signed) THO. GILBERT.

Secretary, Chinese Central Railways.

Witness to the signature of Thomas Gilbert for and on behalf of the Central Chinese Railways, Limited.

WATER S. HENDERSON,

Sol., 31 Lombard Street, London.

THE PUKOW-SINYANG RAILWAY

FULL TEXT OF THE LOAN AGREEMENT

The following is the text of the Loan Agreement for the construction of a railway between Pukow and Sinyang:—

This Agreement is made at Peking on the 14th day of November 1913, corresponding to the 14th day of the 11th month of the 2nd year of the Chinese Republic, and the contracting parties are:—

The Government of the Republic of China (hereinafter called "The Chinese Government") acting through its Minister of Finance, its Minister of Communications, and the special Commissioner appointed to negotiate the present Agreement, of the one part, and Chinese Central Railways, Limited, London (hereinafter called "The Company") of the other part.

Whereas a preliminary Agreement was signed in respect to the Pukow-Sinyang Railway Loan on January 6th, 1899, corresponding to the 25th day of the 11th month of the 24th year of Kuang Hsu, it is now agreed that this final Agreement shall be substituted for the said preliminary agreement, and this final Agreement witnesseth as follows:—

ARTICLE 1

The Chinese Government hereby authorises the Company to issue a five per cent. (5 %) Gold Loan for an amount of £3,000,000. The Loan shall be of the date on which it is issued to the public and shall be called "The Chinese Government Five Per Cent. Pukow-Sinyang Railway Loan."

ARTICLE 2

The Loan is designed to provide capital for the construction of a Government line of Railway from a point on the Tientsin-Pukow Railway, Southern Section, to a point at or near Sinyang on the Peking-Hankow Railway, a distance of about three hundred and fifty miles.

The route to be followed between these two points shall be decided upon by the Director-General of the Railway after completion of the final survey.

ARTICLE 3

The capital so provided shall be solely devoted to the construction of the railway line, including the purchase of the land, rolling stock and other equipment, and to the working of the line and to payment of interest on the loan during the period of construction, which is estimated at 3 years from the actual beginning of the works, the commencement of which is not to be delayed beyond six months from the date of the signature of this Agreement, within which period the Company shall notify the Director-General that a sum not exceeding £200,000 has been placed at the disposal of the Railway Administration, to be held in Europe or remitted to China as it may direct, as a first instalment on account of the proceeds of the loan. This amount of £200,000 or whatever portion thereof is actually advanced, together with interest thereon not exceeding a charge of six per cent. (6 %) per annum, shall be deducted from the proceeds of the sale of the bonds.

ARTICLE 4

The rate of interest for the loan shall be five per cent. (5 %) per annum on the nominal principal, and shall be paid to the bond-holders half-yearly. The said interest shall be calculated from the date on which

the loan is issued to the public and shall be paid by the Chinese Government during the time of construction either from the proceeds of the loan or from other sources, and afterwards in the first place, out of the revenues of the railway, and then from such other revenues as the Chinese Government may think fit to use for the purpose in half-yearly instalments according to the amounts specified in the schedule attached to this agreement and fourteen days before their due dates, Western Calendar, as calculated half-yearly from the date on which the loan is issued to the public.

ARTICLE 5

The term of the loan shall be forty (40) years. Repayment of principal shall commence from the eleventh year from the date of the loan and, except as provided in Article 6 hereinafter, shall be made by yearly amortisation to the Hongkong and Shanghai Banking Corporation out of the revenues of the line or such other revenues as the Chinese Government may think fit to use for the purpose according to the amounts specified in the schedule attached to this agreement, but fourteen (14) days before their due dates, Western Calendar, as calculated from the date on which the loan is issued to the public.

ARTICLE 6

If at any time after the lapse of ten (10) years from the date of the loan the Chinese Government should desire to reduce the whole outstanding amount of the loan or any part of it not yet due for repayment in accordance with the schedule of repayments hereto attached, it may do so until the twentieth (20) year, by payment of a premium of 2½ % (two and half per cent.) on the face value of the bonds, that is to say, by payment of one hundred and two pounds and ten shillings for each £100 bond, and after the 20th year without premium; but in each and every case of such extra redemption, the Chinese Government shall give six months' notice in writing to the Company and such extra redemption shall be effected by additional drawings of bonds to take place on the date of an ordinary drawing as provided for in the prospectus of the loan.

ARTICLE 7

The Hongkong and Shanghai Banking Corporation having been appointed by the Company Agents for the service of the loan the payment due for amortisation and interest, referred to in Articles 4 and 5, shall be made in accordance with the amounts of the schedule attached to this Agreement and fourteen days before their due dates. These payments shall be made by the Director-General to the Hongkong and Shanghai Banking Corporation in Shanghai in Shanghai sycee and/or coin of the national currency, as soon as the said currency shall have been effectively established, sufficient to meet such payments in Gold in London, exchange for which shall be settled with the Bank either on the date of payment or at the option of the Railway Administration at any date or dates within six months previous to any due date for the repayment of interest and principal. These payments may, however, be made in Gold fourteen days before their due dates if the Chinese Government should happen to have

gold funds "bonafide" at their disposal in Europe not remitted from China for the purpose, and desire so to use them.

In reimbursement of expenses connected with the payment of the interest and repayment of principal of the loan, the Hongkong and Shanghai Banking Corporation will receive a commission of one quarter per cent. on the annual loan service.

ARTICLE 8

The Chinese Government hereby unconditionally guarantees that the interest and principal of this loan shall duly be paid in full, and should the revenues of the railway and/or the proceeds of the loan not be sufficient to provide for due and full payment of interest and repayment of principal, the Chinese Government will make arrangements to ensure that the amount of deficiency shall be met from other sources and handed over to the Hongkong and Shanghai Banking Corporation on the date upon which funds are required, to complete full payment of interest and repayment of principal.

ARTICLE 9

The loan shall be secured by mortgage of the railway declared to be now entered into in equity by virtue of this agreement, and shall, as soon as possible hereafter be secured by a specific and legal first mortgage in favour of the Company upon all lands, materials, rolling stock, buildings property and premises of every description purchased or to be purchased for the railway, and on the railway itself, as and when constructed, and on the revenues of all descriptions derivable therefrom.

The provisions of this Article in respect of the mortgage are to be construed and treated as equivalent in purport and effect to a mortgage customarily executed in England.

ARTICLE 10

The Company is hereby authorised to issue to the subscribers to the loan bonds for the total amount of the loan for such amounts as may appear advisable to the Company. The form of the bonds shall be settled by the Company in consultation with the Director-General or the Chinese Minister in London. The bonds shall be printed or engraved in Chinese and English; they shall bear the facsimile of the signature of the Director-General and of his seal of office, in order to dispense with the necessity of signing them all in person. But the Chinese Minister in London shall previous to the issue of any bonds, put his seal upon each bond with a facsimile of his signature, as a proof that the issue and sale of the bonds are duly authorised by, and binding upon, the Chinese Government, and the representative of the Company in London shall countersign the bonds as agents for the issue of the loan.

In the event of bonds issued for this loan being lost, stolen or destroyed, the Company shall immediately notify the Director-General and the Chinese Minister in London, who shall authorise the Company to insert an advertisement in the public newspapers notifying that payment of the same has been stopped and to take such other steps as may appear advisable or necessary according to the laws and customs of the country concerned, and should such bonds not be recovered after a lapse of time to be fixed by the Company, the Director-General or the Chinese Minister in London shall seal and execute duplicate bonds for a like amount and hand them to the Company, by whom all expenses in connection therewith shall be defrayed.

ARTICLE 11

All bonds and coupons and payments of interest and repayments of principal in connection with the service of the loan shall be exempt from all Chinese taxes and imposts during the currency of this loan.

ARTICLE 12

All details necessary for the prospectus and connected with the payment of interest and repayment of the principal of this loan, not herein explicitly provided for shall be left to the arrangement of the Company in consultation with the Chinese Minister in London. The Company is hereby authorised to issue through its Agents the Hongkong and Shanghai Banking Corporation the prospectus of the loan as soon as possible after the signing of this agreement (subject to the provision stated in Article 13 below by several series) and the Chinese Government will instruct the Chinese Minister in London to co-operate with the Company in any matters requiring conjoint action and to sign the prospectus of the loan.

ARTICLE 13

The loan shall be issued to the public in two or more series of bonds to the amount of three million pounds sterling (£3,000,000) as soon as possible after the signature of this agreement, subject always to the engagement of the Chinese Government under Article 13 of the Chinese Government Reorganisation Gold Loan of April 26, 1913.

The price of the bonds to the Chinese Government shall be the actual price of issue to the public in London less flotation charges of five

and a half points (5½) retainable by the company (that is to say a charge of Five Pounds Ten Shillings (£5.10/—) for every £100 bond issued).

ARTICLE 14

The proceeds of the loan shall be paid to the credit of a Pukou-Sinyang Railway Account with the Hongkong and Shanghai Banking Corporation in London. Payments of loan proceeds into the credit of this account shall be made in instalments and on dates conforming to the conditions allowed to the subscribers to the loan. Interest at the rate of three (3) per cent. per annum shall be granted on the credit balance of the portion of this account kept in London and interest on the credit balance of the portion transferred to China will be allowed at the Bank's usual rates for such accounts. After deduction of the funds required for the service of interest and for commission on this service during the time of construction, the Bank will hold the net proceeds with accrued interest to the order of the Director-General who in authorising the payment of any sums exceeding £20,000 shall give notice to the Hongkong and Shanghai Banking Corporation ten days before the day on which they are required. Requisitions on the loan funds will be drawn in amounts to suit the progress of construction of the railway by orders on the Hongkong and Shanghai Banking Corporation signed by the Managing Director or his duly authorised representative and the Chief Accountant, and accompanied by a certificate stating the nature and cost of the work to be paid for.

Funds to meet monthly estimates of construction expenses shall be transferred to Shanghai as and when required by order of the Director-General, such transfers being effected through the Hongkong and Shanghai Banking Corporation, and the transferred funds shall remain on deposit with this Bank until required for railway purposes.

The accounts of the railway will be kept in Chinese and English, in accordance with the accepted modern methods, under the direction of a duly qualified British Chief Accountant to be chosen and appointed by the Director-General with the previous consent of the Company. The terms of his agreement will be fixed by the Director-General. The Chief Accountant will draw up a list of the necessary staff for his Department for submission to the Director-General, who shall decide and make the appointments, and the Chief Accountant shall have sole charge under the authority of the Director-General and/or the Managing Director or his Representative of all disbursements and receipts of railway funds during the currency of this loan, and shall sign, in conjunction with the Managing Director, all documents appertaining to the disbursements of railway funds. The Railway Administration will publish annually upon the close of its financial year a report in the English and Chinese languages showing the working accounts and traffic receipts of the railway, which report shall be procurable by the public on application.

ARTICLE 15

If during the time of construction the net proceeds of the present loan with accrued interest should, after deduction of the sums necessary for the service of interest on the loan, not be sufficient to complete the construction and equipment of the railway line, the amount of deficiency shall be provided, in the first place, from such Chinese funds as may be available so as to permit of the uninterrupted continuance of the work of construction, any balance then uncovered being supplemented by a further foreign loan for the amount required, to be issued by the Company. The interest and other conditions of such supplementary loan to be the same as in the present agreement.

If after the completion of the line there should be a balance at credit of the railway account, such unused balance will be transferred to the credit of the interest reserve fund hereinafter mentioned in Article 17 as a provision for payments for which the Chinese Government is responsible under this agreement.

ARTICLE 16

The construction and control of the railway shall be vested entirely in the Chinese Government. The Chinese Government will appoint a Director-General of the Railway, who will reside in the immediate neighbourhood of the line, and have full power to act in the name and on behalf of the Government within the terms of the present agreement. The Engineer-in-Chief who will be chosen and appointed by the Director-General with the previous consent of the Company, shall be a duly qualified British Engineer and shall take orders from the Director-General, the Managing Director or his duly authorised representative. The terms of his agreement will be fixed by the Director-General. His duties will be to make the survey, draw up the plans of the line and make estimates, to direct the execution of the works and to order under the authority of the Director-General, the Managing Director or his duly authorised representative, all the materials and equipment necessary for the exploitation of the

railway. He will draw up a list of the necessary Chinese and foreign Engineering Staff for submission to the Director-General, and the latter shall appoint and send them to the Engineer-in-Chief, who shall then assign works to them. Whenever appointments of technical employes, both Chinese and foreign, are to be made or their functions defined, as well as in the case of their dismissal, the Engineer-in-Chief shall be empowered to take the necessary action by the Director-General, the Managing Director or his representative.

As and when any section of the line is constructed and ready for traffic it will be handed over by the Engineer-in-Chief to the Director General, who will, as far as circumstances permit, open such section to traffic, and will select a duly qualified British Traffic Manager, who will be charged with the operation of the railway under the order of the Director-General and/or the Managing Director or his Representative.

When the work of construction is entirely completed the service of the Engineer-in-Chief will terminate and the Director General will select a duly qualified British Engineer for the maintenance of the railway under the orders of the Director General and/or the Managing Director or his representative.

The two officers above referred to shall be appointed by the Director-General with the previous consent of the Company, and the Director-General shall fix the terms of their agreements.

ARTICLE 17

All receipts and earnings of the railway shall be regularly paid into the Railway's account with the Hongkong and Shanghai Banking Corporation, interest on such funds being allowed by the Bank at rates to be arranged for current account or fixed deposit as the case may be.

All expenses of working and maintaining the line shall be paid from the receipts and earnings, and any remainder thereof shall be charged with the service of the loan. If, after payment of these expenses, and making due provision for payment of interest on the bonds, and for repayments of principal due in accordance with the amortisation schedule hereto attached, there remain surplus funds unappropriated and properly available for other purposes, such funds shall be at the disposal of the Chinese Government to be used in such manner as the Director-General may decide, provided always that after completion and opening of the line to traffic the amount sufficient for regular payments of interest and repayment of principal shall be deducted from such surplus funds, if any, and shall be deposited with the Hongkong and Shanghai Banking Corporation six months before the date on which such payments fall due.

In the event of there being no surplus funds available as aforesaid from the earnings of the railway the amount required for payments of interest and repayments of principal shall be provided in accordance with the conditions of Article 8 hereinbefore.

ARTICLE 18

The Company will act as Agents of the Railway Administration during construction for the purchase of all materials, plant and goods required to be imported from abroad. For all important purchase of such materials tenders shall be called for by the Director-General; in the case of all tenders indents and orders for the importation of goods and materials from abroad, the said Agents shall purchase the materials required on the terms most advantageous to the railway, and shall charge the original net cost of the same, plus a commission of five per cent. It is understood that

no orders for materials shall be executed or any expenditure incurred without the approval of the Director-General, to whom the Engineer-in-Chief shall apply for sanction.

In return for payment of commission as above stated the Company shall be prepared to superintend the purchase of all foreign materials required for the construction and equipment of the railway, which shall be purchased in the open market at the lowest rate obtainable, it being understood that all such materials shall be of good and satisfactory quality, and that the Railway Administration shall have the right to reject on arrival in China materials which do not come up to specifications. At equal rates and qualities goods of British manufacture shall be given preference over other goods of foreign origin.

Original invoices and inspectors' certificates are to be submitted to the Railway Administration; all return commissions and rebates of every description shall be credited to the railway, and all purchases made by the Agents, on behalf of the Railway, shall be supported by manufacturers' original invoices and inspectors' certificates.

No commission shall be paid to the Agents except as above provided, but it is understood that the Railway Administration shall provide out of railway funds for the remuneration of Consulting Engineers, whenever their services are engaged.

With a view to the encouragement of Chinese industries preference will be given, at equal prices and qualities, over British or other foreign

goods, to Chinese materials and goods manufactured in China. No commission will be paid to the Company on purchases for such materials and goods.

It is understood and agreed that after completion of construction of the railway the Company will be given the preference for such agency business, during the currency of the loan, for the supply of foreign materi-

als as the Railway Administration may require, on terms to be hereafter mutually agreed upon.

ARTICLE 19

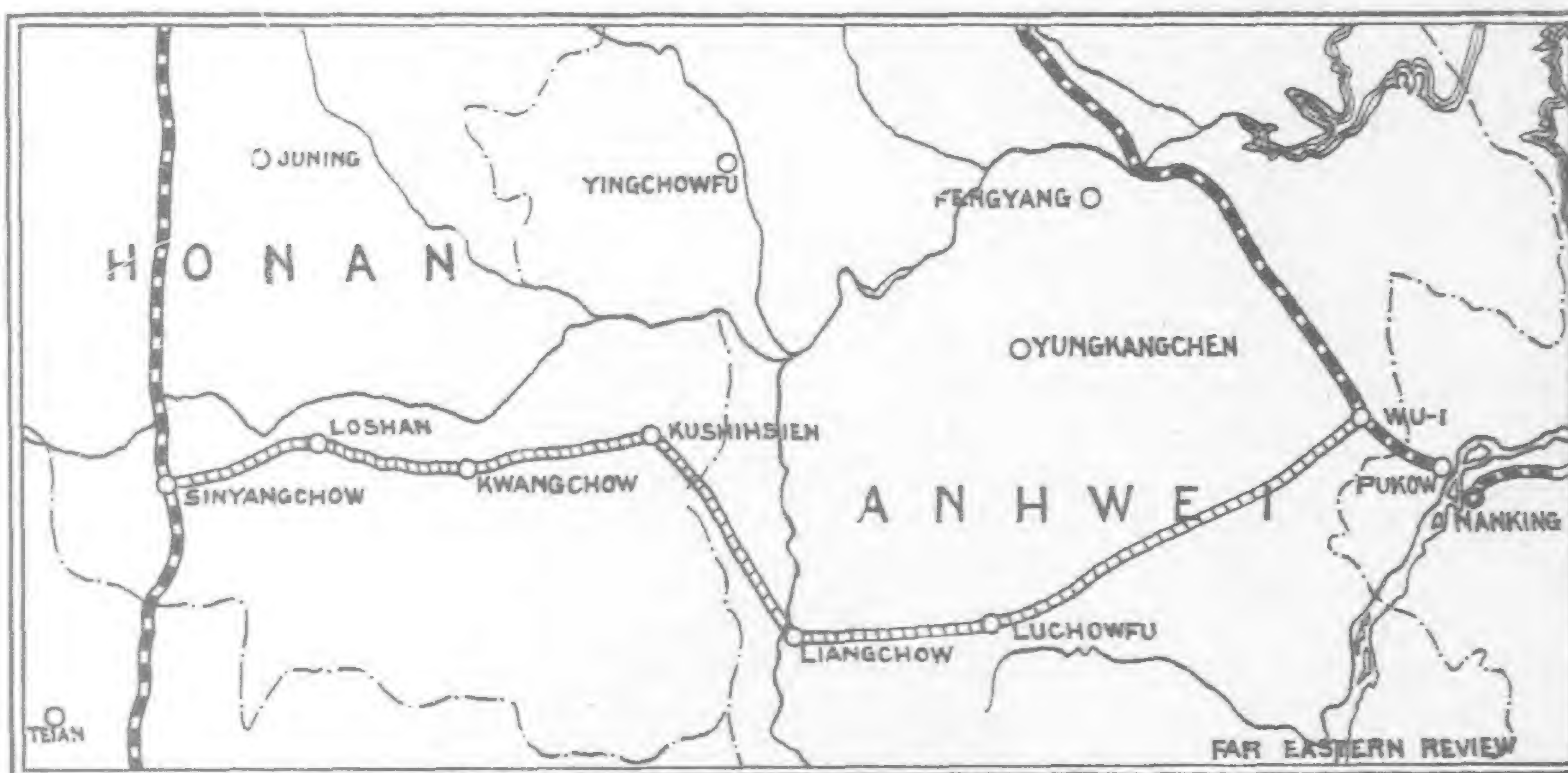
Branch lines or extensions in connection with the railway line mentioned in this agreement that may appear to the Chinese Government profitable or necessary later on shall be built by the Chinese Government with funds at their disposal from Chinese sources, and, if foreign capital is required, preference will be given to the Company. The length of such branch lines or extensions, shall be determined by the Chinese Government.

ARTICLE 20

The Company is hereby appointed Trustees for the bondholders, and in any future negotiations respecting this loan or matters arising in connection therewith, which may take place between the Railway Administration and the Company, the latter shall be taken as representing the bondholders and as empowered to act on their behalf.

ARTICLE 21

If, after the signature of this agreement and before the publication of the prospectus for the issue of the loan, any political or financial crisis should take place by which the market and the prices of existing Chinese Government stocks are so affected, as to render, in the opinion of the Company, the successful issue of the loan impossible on the terms herein named, the Company shall be granted a reasonable extension of time to be mutually agreed upon for the performance of their contract. If within the time limit then determined the loan shall not have been



ROUTE OF THE PUKOW-SINYANG RAILWAY.—In a map published in our November issue we inadvertently showed the route running due north from Liuaachow to Chengyangkwan. This map shows the real route.

issued, then this contract shall become null and void, and any advances made by the Company under the provision of Article a of this Agreement shall be repaid by the Chinese Government with accrued interest, but without any other compensation or remuneration whatsoever.

ARTICLE 22

By the preliminary agreement dated January 6th, 1899, it was stipulated that the terms and conditions of the present agreement should be subject to the terms and conditions contained in the final agreement for the Shanghai-Nanking Railway.

Article 12 of the said final agreement for the Shanghai-Nanking Railway provides for the participation by the lenders in the net profits of the railway after certain charges have been met, to the extent of 20 %, and net profit certificates were issued to the lenders to the amount of 20 % of the nominal capital of the loan.

It is hereby mutually agreed that in consideration of the Company waiving its rights under the aforesaid preliminary agreement it shall be granted the right to retain, in commutation of this participation in net profits £120,000 out of the proceeds of the loan in instalments and on dates in proportion to, and based on, the terms of subscription to the loan, as stated in the prospectus. No further payment in respect of commutation of profits will be allowed on any supplementary loans.

ARTICLE 23

The Company may, subject to all its obligations under this agreement transfer or delegate all or any of its rights, powers and discretions thereunder to any British Company Directors or Agents with power of further transfer and sub-delegation; such transfer, sub-transfer, delegation or sub-delegation to be subject to the approval of the Director-General.

ARTICLE 24

This loan is contracted after having been passed by the National Assembly under the authority of a Presidential order, dated the 14th day of November 1913, Western Calendar, which has been officially communicated to the Minister of Great Britain, in Peking, by the Waichiaopu.

ARTICLE 25

Four sets of this Agreement are executed in Chinese and English, three sets to be retained by the Chinese Government and one set by the Company.

In the event of any doubt arising regarding the interpretation of the contract the English text shall rule.

Signed at Peking by the contracting parties this 14th day of the eleventh month of the 2nd year of the Chinese Republic, corresponding to the fourteenth day of November, 1913, Western Calendar.

Signed by

HSIUNG HSI-LING, Minister of Finance.

(Seal)

CHOW TZE-CHI, Minister of Communications.

(Seal)

SHEN YUN-PEI,

For Chinese Central Railways Limited,

S. F. MAYERS.

THE ACTIVITIES OF THE PEKING SYNDICATE

The following is in reference to the report of the Peking Syndicate:—

It is some 16 years since the Peking Syndicate was formed with concessions over great areas of rich mineral lands in Shansi and Honan, and another annual report shows that the undertaking is still in what is known as the development stage. The high hopes formed at the inception of the enterprise under influential auspices have been deferred again and again by adverse circumstances, not the least of which has been the attitude of the provincial authorities, culminating about six years ago in the retrocession of the Shansi concession.

So far the main business of the directors has been the development of the coalfield in Honan, and up to June 30, 1913, the date of the balance-sheet now issued, a net sum of £600,000 had been expended on this property, after deducting the receipts from the sales of coal. In their report this year the directors explain briefly the original plans of the former board for the establishment of the Ja-mei-sen Mines and indicate how the completion of this program has been delayed by unavoidable circumstances. Not least among these adverse circumstances have been the two separate inbursts of water during the financial year under review. In October, 1912, there was an inburst which was estimated to be at the rate of 190,000 gallons an hour and which reduced the output from two of the pits by 1,000 tons a day. In April this year there was an even greater inburst, entirely independent of the other, and the output from the part of the colliery affected by this second influx was reduced by 500 tons. However, the year's total output of 402,451 tons from the whole colliery was only 67,687 tons less than that for the preceding year so that is obvious that but for the inbursts of water the total production of coal would have shown a substantial increase.

Dwindling Cost of Development

Besides diminishing the output, this latest water trouble has, of course, retarded development and necessitates the installation of additional pumping plant. The year's expenditure on the coalfields, after deducting the proceeds of the sales of coal, amounted to £27,036. This compares with £52,222 for the preceding year. The directors state that if some £15,000 had not been spent on the unwatering of the pits the item would have been reduced still further to about £12,000, and they deduce from this the conclusion that but for the inbursts of water the development stage at the

Ja-mei-sen Mines would already have been completed. As regards the time when this happy consummation will now be reached the report goes no farther than to say that "when the development equipment of No. 3 pit is completed and No. 1 pit is in working order, the capital account at Ja-mei-sen Colliery may be closed and the revenue account opened."

As to the syndicate's railway interests, the report points out that the Chinese Central Railway Company, in which the syndicate has an interest of about one-fifth, has recently resumed its former activities, and has already obtained the concession of the Sinyang-Pukow Railway against a loan of three millions sterling. The directors express the hope that the industrial era that appears to be rising in China will secure a considerable profit on portion of the syndicate's capital invested in this company.

New Bank's Big Contract

An important extension of the syndicate's operations has been its recent participation in the establishment of the Banque Industrielle de Chine, by means of which the directors hope to achieve a better apportionment of the syndicate's capital between banking, mining, and railway interests. Moreover the close connection of this British company with a French Bank whose chief shareholder is the Chinese Government should create a system of co-operation and profit sharing between the capitalists of both countries and the Chinese officials, and should prove advantageous to all three parties. The manner in which the syndicate has raised the funds to subscribe for its holding of 1,000 Founders' shares and 15,350 Ordinary shares is not indicated, the bank being established a few days after the date to which the Peking Syndicate accounts are made up. An important example of the class of transaction into which the new bank is entering is given in the report. The Chinese authorities have recently decided to establish a thoroughly-equipped up-to-date port at Pukow, adjoining which the syndicate has extensive lands. The works are to be entrusted to the new bank, a contract having been signed between the bank and the Chinese Government for a loan of £6,000,000, out of the proceeds of which the works will be first taken in hand. These works will naturally increase the value of the syndicate's land in the vicinity.

For its current revenue the syndicate relies mainly on the income from its holding of £800,000 of the Chinese Government Honan Railway Five per Cent. Gold Loan of 1905. After adding sundry revenue and deducting administration expenditure there is a balance of £17,815 for the year, against £28,168 for the preceding year. The balance again goes to swell the accumulated credit balance of the profit and loss account, which now amounts to £458,258. But the principal change in the balance-sheet is the appearance among the liabilities of a loan of £150,000 from bankers against securities. On the assets side the proceeds of this loan are represented mainly by increases of £55,000 in "investments" and £78,000 in "shares in other companies and syndicate participations;" these two items amounting at June 30 to £218,857 and £98,664 respectively. The cash balances, too, at £76,853, are about £28,000 larger than last year, but £17,000 of the increase is attributable to a decrease of that amount in the stocks of coal. The principal other items on the assets side consist of £733,511 in respect of the Government bonds; the £600,000 of coalfield expenditure, to which we have already referred; £133,732 representing the amount apportioned to the Honan concession; and £42,108 for the syndicate's steam collier.



MR. LAO CHU CHANG, Managing Director of the Pukow-Sinyang Railway

Share Quotation Anomaly

The issued capital has remained, of course at £1,242,822 in three classes of shares. The market quotations for the Ordinary and Shansi shares are still strangely at variance with their comparative intrinsic values. In 1910 the rights of the different shares with regard to dividends and capital were definitely determined and by examining the effect of the somewhat complicated regulations then laid down it is possible clearly to bring out the remarkable discrepancy. The effect of these regulations is that by the distribution of the first £88,666 of profit the Shansi shares would receive 9½d. per share, while the Ordinary would receive 2s. per share. The next £2,098,282 of profit distributed would give 19s. 2½d. per Shansi share and £1 3s. 8d. per Ordinary share, and each succeeding £100,000 of profit would give 1s. 3d. per Ordinary share. It is obvious from this that the dividend per Ordinary share will throughout be substantially greater than that per Shansi share. Yet the Ordinary shares are quoted at 1½, and the Shansi at 1¼. In the course of the various wide fluctuations that have occurred in the shares the discrepancy lessens from time to time, but at present it is remarkably large. The only explanation that can be adduced is the fact that the Shansi shares are more closely held and are therefore less liable to acute depression, such as the recent political condition of China has caused in the Ordinary shares.

It is obvious that the shareholders will still have to wait some years before they receive what can be regarded as an adequate return on their capital after the long period without dividends. The directors express confidence that the syndicate's policy will sooner or later produce a large and steady profit on the capital. How soon this desirable stage is reached depends, among other things, on the attitude of the Chinese authorities, and the report is quite reassuring in this respect. It states that even before the establishment of the Banque Industrielle de Chine, which has made the former connection closer, the syndicate has had many reasons to be satisfied with the friendly attitude of the Chinese officials regarding its Honan properties, while, quite recently, encroachments by some of the Honan people on the company's area have been prevented by order of the authorities.

THE FAR EASTERN REVIEW

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CAPITAL IN THE PHILIPPINES.

A most important pronouncement of policy in regard to capital invested in the development of the Philippines Islands has been made by the Governor-General, Mr. Francis Burton Harrison. Capital which goes to the Philippines for business, and which does not concern itself with politics is assured of a hearty welcome, declares Mr. Harrison, and he adds that the Government will do everything it legitimately can to protect the interests of investors. This statement, the importance of which cannot be over-estimated, was made in connection with the concession granted early in January to the Kolambugan Lumber Company over 150 square miles of territory in Mindanao.

All those whose interests are bound up in the Philippines will welcome this timely declaration by the Governor-General. There is an unlimited field for the profitable investment of capital in the Islands. Capital, is, however, proverbially timid and there has been some hesitation manifested in taking advantage of the opportunities that offered. Fear was felt that the attitude of the Administration might not be sympathetic. Mr. Harrison has shown that these fears are groundless. Moreover he has demonstrated that his policy is broadly based. The Kolambugan Lumber Company is a British concern. Foreign as well as American capital devoted to the legitimate development of the Islands will be welcomed and protected. This pronouncement should have a most beneficent influence and it may be expected with confidence that more capital will now seek investment in the Philippines with the result that there will be a widening field of employment for the Filipinos and a healthy reaction upon the finances of the possession.

CHINA'S MINING DISTRICTS

The Minister of Commerce and Industry is pushing forward proposals for the development of mining, and has placed before the Cabinet a scheme for the division of the country into eight mining districts to be controlled by the Mining Supervision Bureau. If this scheme is adopted one superintendent will be appointed to control each of seven divisions, the one comprising the provinces of Chihli, Shantung, Shansi, and Honan coming directly under the Ministry of Commerce and Industry. The headquarters of the second division will be at Changchun, on the South Manchurian railway, and the regions under the superintendent stationed there will be Fengtien, Kirin, and Heilungkiang. The third district will be composed of the provinces of Anhui, Kiangsu, and Chekiang, with headquarters at Nanking, while the fourth district will be Hupeh, Hunan, and Kiangsi, with headquarters at Changsha. The fifth division will be Shensi, Kansu, and Singkiang, with headquarters at Changan; the sixth will be Kwangtung, Kwangsi, and Fukien, with headquarters at Canton; the seventh will be Yunnan and Kweichow, with headquarters at Kunming, in Yunnan; and the eighth will be Szechuan alone, with headquarters at Chengtu. It is proposed to engage experts to prospect the areas, make analyses and survey mineral fields, while regulations will be devised to regulate certain aspects of operation with a view to the protection of the lives and safety of miners. The Bureaux will supervise the granting and withdrawal of mining rights, the collection of mining taxes, the encouragement of development, etc. The promulgation of mining regulations is being eagerly awaited by many who have potentially rich deposits in view for development, and if the old official harassment is abolished, and the provisions for the introduction of foreign capital are liberal, as the Minister for Commerce and Industry assured us they would be, there should be witnessed in the near future a considerable improvement in the mining industry. Railways are being pushed out into regions where large deposits of varying minerals exist, and the only thing that now retards proper and scientific development is the lack of laws which will safeguard foreign capital. Once laws giving security to investments are enacted there will be a quick response on the part of capitalists, and many localities already ear-marked will be the scenes of activity.

OPEN PORTS IN NORTH CHINA

Early in January the Chinese Government spontaneously opened to foreign trade seven towns in North China. These were:—Kweiwacheng in Shansi; Chihfeng, Kalgan and Dolonor in Chihli, Lungkow in Shantung, Taonanfu in Western Shengking and Kulutao, the new port under construction in south-western Shengking. It is evident that the object in view is to preserve China's interests in the region that is threatened with the dominance of Russia and Japan, though it may be unfair not to credit the Chinese Government with the realization that the encouragement of foreign trade is *per se* well worthy of its attention. There is some difference of opinion in regard to the value of the opportunities afforded to foreign trade by the opening of these cities, and the view is widely held that political rather than economic considerations dictated the step. Still, it may be conceded that, in principle, the more places in China that are opened for foreign trade the better both for China and for the foreign merchant. During the regime of the Provisional Government at Nanking it was understood that eventually the whole country would be thrown open to unrestricted trade, residence and travel. If that could be brought about China would undoubtedly move forward at a greatly accelerated pace.

If any considerable international trade were to be established at the five new open ports outside the Great Wall, there is no doubt that China's hold upon Inner Mongolia would be greatly strengthened. The question arises, however, whether the expedient has not been adopted too late. Japan recently acquired the right to construct for China a railway running from Taonanfu to Jehol, amongst others. This will extend Japanese influence considerably farther westward than heretofore, and the idea of consolidating China's power in Inner Mongolia by building lines from Peking to Jehol, from Jehol to Chihfeng, and from Chihfeng to Dolonor must be weighed with due recognition of Japan's consolidated position. If these lines are to be constructed the question is by whom? Great Britain by the Notes exchanged with Russia in 1899 cannot seek "any railway concessions to the north of the Great Wall of China." There would be a certain amount of cynical humour in the position if the Belgians or French, whose close association with Russia is fully set out in a lengthy article elsewhere, were to be entrusted with the task of building railways to preserve China's rights in Inner Mongolia. Disinterested observers will lament the absence of the American Group and the apparent cessation of active interest by the State Department at Washington in Chinese affairs. At this juncture practical and sympathetic assistance in reference to the Mongolian question would be of incalculable value to China and would at the same time greatly benefit American interests.

ENCOURAGEMENT OF CHINESE INDUSTRIES

If the professions of the various Ministers of the Peking Cabinet are to be taken as a criterion there is to be an industrial boom in China. On all possible occasions, in Presidential Mandates, in speeches, and interviews with correspondents, they take the fullest advantage of the opportunity to stress the fact that they realise to the full that upon industrial development, and the expansion of means of communication, depend the progress of the country. No words are minced in the endeavor to convince the possible sceptic that they intend ceaselessly to keep their shoulders to what has always been in the past a Sisyphean stone, and if Presidential Mandates, which focus these intentions, are of value, then we are on the eve of important developments. Already we have reported the hopes of the Minister of Commerce and Agriculture with respect to mining; in this issue we deal with the creation of the Irrigation and Conservation Bureau; there have been placed before the Government for adoption definite proposals for currency reform, and already regulations have been issued for the encouragement of Chinese commercial enterprises. These regulations create what is called an "Interest Guarantee Fund," or "a Pao-hsi Fund," to give the Chinese title. It provides for the setting apart by the Government of a sum of \$20,000,000 in Government bonds to be used "as an endowment for the Interest Guarantee Fund," the annual interest of which may be advanced to companies

of what is called the first class, such as "cotton textile, woollen textile and iron works industries," and companies of the second class such as "silk, tea, and sugar factories," so that the "interest of the shares of the companies may be secured and guaranteed." Any first class company may apply and register for the protection of the Interest Guarantee Fund to the amount of 6 per cent. of the actual paid up capital of the Company, and any second class company to the amount of 5 per cent. Only new Chinese companies organised under Chinese laws may receive guarantees, and then only in the case of first-class companies if their paid-up capital is not less than \$700,000, and second-class if the paid-up capital is not less than \$200,000. The privilege of the guarantee is to be limited to three years from the date when manufacture begins, and commencing with the sixth year after the first receipt of the guarantee the recipient company must repay one-twenty-fourth of the total received every year. Regulations make provision for cases of failure or fraud or various vicissitudes, and the management of the scheme is in the hands of the Bank of China. The Minister of Finance (Mr. Hsiung Hsih-ling) and the Minister of Commerce and Agriculture (Mr. Chang Chien), both of whom have had considerable experience with Chinese industries, are responsible for the presentation of the scheme, the regulations of which came into force on the date of promulgation on January 13. In promulgating the regulations the President made the comment that, "a careful perusal of these regulations will show that they have been well drawn up, and therefore they are hereby approved."

CHINA REVISES HER BUDGET.

Early in January the Minister of Finance issued a revised Budget showing a deficit of \$84,940,731, as against that of the previous statement of \$70,000,000. The Budget prepared last year was found to contain what are described as "defects," and in a statement by the Minister of Finance it is explained that finances have been seriously affected by the state of rebellion in the country, which not only impoverished the people, but likewise prevented the disbandment of troops. The former Cabinet estimated the military expenditure for the whole country at \$130,000,000 for the upkeep of fifty divisions of Luchun, while the amount to be saved by the disbandment of superfluous troops in the provinces was fixed at \$27,000,000. That disbandment was not, of course, effected. It was estimated, too, that the Government could raise \$120,000,000 by domestic loans, but again the aftermath of the rebellion interfered and the bonds could not be sold. As the Finance Minister aptly says, the making of estimates "is like drawing a pudding on a piece of paper. It looks like one but fails to satisfy hunger." The Minister proposes that an effort should be made to improve affairs so that receipts and expenditure might be balanced. He urges that all "corrupt practices be done away with;" that economy be studied; that the provinces refrain from using loans to assist them to balance their accounts; and that all expenditure be met from income. The figures now prepared for the year from July, 1, 1913 to June 30, 1914, are: Total receipts \$557,296,145, and total expenditure \$642,236,876, made up as follows:

A.—Ordinary Receipts—Land Tax \$79,180,722; Salt Tax 77,401,265; Customs Tax 66,970,003; Likin 32,704,806; Other Taxes 37,862,160; Other Duties 3,811,172; Public Property 7,849,612; Miscellaneous 12,385,813. Total 318,165,553.

B.—Extraordinary—Land Tax \$3,222,888; Salt Tax 164,269; Customs Tax 1,254,280; Likin 6,054; Other Taxes 417; Other Duties 132,412; Public Property 634,093; Miscellaneous 10,115,871; Contributions 230,308; Public Loan 223,370,000. Total \$239,130,592.

A.—Ordinary Expenditure—Ministry of Foreign Affairs \$3,293,115; Ministry of Interior 39,618,149; Ministry of Finance 210,345,180; Ministry of Education 5,207,215; Ministry of War 136,864,494; Ministry of Navy 7,665,881; Ministry of Justice 14,671,825; Ministry of Agriculture and Commerce, 5,083,386; Ministry of Communications 934,877. Total \$423,684,122.

B.—Extraordinary—Ministry of Foreign Affairs—\$1,013,223; Ministry of Interior 4,263,860; Ministry of Finance 181,568,614; Ministry of Education 1,701,635; Ministry of War

26,910,518; Ministry of Navy 1,307,014; Ministry of Justice 370,312; Ministry of Agriculture and Commerce, 959,735; Ministry of Communications 457,843. Total \$218,552,754.

A hopeful sign is the revival of the system of the provinces sending contributions to the Government, which is significant of the existence of better relations between the Central Government and the provinces. For a considerable time the provinces instead of remitting contributions to Peking demanded monetary aid. A semi-official statement shows the amounts remitted or promised to Peking by the provinces as follow:—

Kiangsu \$1,000,000, which has been received.
 Chekiang \$200,000, which has been received.
 Shantung \$500,000, which has been received.
 Kiangsi \$800,000, of which \$400,000 has been received.
 Shansi \$400,000, of which \$200,000 has been received.
 Kansu \$100,000, which has not yet been received
 Honan \$300,000, which has not yet been received.

GOLD IN THE PHILIPPINES

INTERESTING DISCOVERY BY BUREAU OF SCIENCE

Another evidence of the value of careful records of the strata or rocks pierced in drilling artesian wells has lately come to light in the finding of gold in the rock cuttings submitted from a well drilled at Casiguran, Sorsogon, Philippine Islands. Through a special arrangement the Bureau of Public Works submits samples of the strata pierced by the well drilled by them to the Bureau of Science where the cuttings are examined by the geologists and a record is filed showing the character of the rocks encountered. Recently, stratification samples from well 537, lately completed by the Bureau of Public Works for the town of Casiguran, Sorsogon, were received by the Bureau of Science. An examination revealed considerable mineralization in the samples of cuttings submitted as representative of the rocks encountered between 250 and 300 feet in depth. This sample was panned and a number of small pieces of gold or "colors" were obtained. A duplicate assay on the crushed samples showed a value of pesos 5.30 remaining after part of the gold had been removed by panning. While the quantity of cuttings received is too small to yield a representative sample, the rock is unquestionably gold-bearing.

For various reasons driller's samples do not always fairly represent the formation throughout the depth which is marked on the sample sacks. This possible irregularity must be considered in estimating the importance of the discovery of gold in the sample submitted. On the other hand, the Bureau of Science has no reason for suspecting that the samples received in this case are not representative. Certainly the stratification samples received check very well with the record of the drilling contained in the driller's original log, as will be apparent from the following comparison.

The well in question is 520 feet deep and supplies 20 gallons of water per minute by pumping. Casiguran is located on an alluvial plain just above sea level on the southern shore of Sorsogon Bay. Immediately behind the town are hills and spurs of basaltic to andesitic flows, tuffs, and breccias which form the northern slopes of the volcano, Mount Bulusan. The driller's log shows the first 60 feet of the well to be in yellow "sand and clay, very soft." Sample 1, received by the Bureau of Science is marked "0 to 60 feet" and is stiff, sandy clay. The driller's log describes the material encountered from 60 feet in depth to the bottom of the well all as "sand." The cuttings for each 10 to 20 feet, are recorded, usually simply as "sand," or "dark and white sand." Sample 2 received by the Bureau of Science is marked from 60 to 250 feet, and consists of coarse to fine, sharp sand with both light and dark colored grains. Sample 3, 250 to 300 feet, is likewise a sand, but the character of the pieces lead to the belief that the sand results from the cutting action of the drill in solid rock. The sand contains pumice, obsidian, banded silica and pieces of a silica-impregnated felsite, carrying pyrite and other minerals. Samples 4, 5, 6, 7 and 8 representing the interval between 300 and 520 feet, appear to be original sands. The grains are principally of pumice, which is white and obsidian and basalt, which are black; consequently the sands are "light to dark" in color as noted by the driller.

While the driller's classification indicates a well in sand practically throughout its depth, his log shows that he was able to drill in advance of his casing from 249 to 300 feet, whereas at all other depths the casing was driven so as always to extend nearly or quite to the bottom of the well. This fact supports the idea suggested by the nature of the cuttings in sample 3; that is, that the material from 250 to 300 feet in depth in which the gold occurs stood up as solid rock.

Sample 3, 250 to 300 feet in depth, contains fragments of pumice, obsidian, basalt, and a felsitic to porphyritic light-colored rock. The light-colored rock is in part glassy but contains a few very small phenocrysts, some of which are light colored, probably feldspars, and others dark black in color, hornblende or possibly pyroxene. The rock fragments, both dark and light colored, contain pyrite and other minerals and appear to have been impregnated with silica, which may be seen with a banded structure in some of the fragments. The individual pieces in the cutting are too small to permit of close mineral determination.

The gold occurs free in part at least and is very fine. Some of it can be obtained by panning the cuttings—more readily after the latter have been crushed—and under the microscope the individual pieces are seen as minute, sharp-edged plates or laminae. Adhering to the gold and also in plates is a silvery white metallic mineral which is probably a telluride although a positive test for tellurides could not be obtained.

It appears that between 250 and 300 feet the well passed through the edge of a volcanic flow or fine volcanic breccia, which is intercalated with pumicious volcanic tuffs and some alluvial sands. The rock containing the gold has been impregnated with solutions carrying silica and other minerals.

Gold has never been reported from Casiguran, although the river gravels at Juban a few kilometers farther east are said to carry gold. The district has never yielded any gold, however, and the results of the examination of the drill cuttings of this well constitute a genuine discovery of gold.

THE MAT INDUSTRY IN THE PHILIPPINES

Few people realize the number of mats that are woven each year in the Philippines and how extensive the domestic commerce in them is. The "petate" or "banig" is made in towns here and there throughout the islands. In some places strips of the young buri palm leaf are used. In other towns the mats are woven from strips of pandan leaves. In the Visayan islands and Mindanao, a great many are made from the stalk of a sedge called tikug. The women in towns where mats are made add a considerable amount of money to the family income through the production and sale of petates.

The mats are bought up by traders and small merchants and are distributed by them throughout the islands. In many towns where materials suitable for mat making exist, mats are imported and are sold at prices several times greater than what they can be produced for locally. The bureau of education is introducing the art of mat weaving in such localities with considerable success. For instance, the weaving of tikug mats was introduced in the schools of Talocogon in Agusan province. This occurred about a year ago. Previous to that time no mats were made in the municipality and the people were supplied with mats imported from Samar. Now, enough petates are made to supply not only local needs but also for export in considerable quantity. The bureau of education also recognizes the value of Philippine mats for floor and wall decorations both in the Philippines and in the United States and is encouraging the production of decorated mats for this trade. The sabutan and tikug wear well on the floor. A store is now established in Manila which handles the latter mats exclusively.

One of the most decorative mats is that which comes from the island of Romblon. It has a very fine border which gives a lace effect and is an excellent background for mounting pictures and curios.

INDUSTRIAL DEVELOPMENT IN SHANTUNG

A Peking paper reports:—Mr. Fan Fu, Commissioner of Industry, Shantung, is working hard for the improvement and development of industry in the province. As soon as he took up the post, he published his policy for the industrial administration to be carried out in Shantung. Later, he established an organ called the "Shantung Industrial Magazine" and started to interest the public in the subject. His earnest efforts must have borne fruits, for recently the enthusiasm of the people has been stirred up, with the result that a number of industrial schemes is being contemplated.

One of them is the establishment of a spinning mill at Kaotang, a place famous for cotton production. A company has been organized there by a certain Cheu Wen-chang for the purpose of manufacturing cotton yarn with the local production. It is said that the first payment on the subscription of shares has been made. The capital is understood to be of a small amount, however.

Another project is restarting the work of the Tungchang Spinning Mill. It must be remembered that the factory was established some years ago, but owing to mismanagement was reduced to the state of suspension. An order is now issued by the authorities commanding the shareholders to resume the work. The matter being considered by the parties interested in the enterprise, something will be done toward the recommencing of operations.

Yenchow and Tsining producing tobacco, many are engaging in the manufacture of cigarettes. But as all of them are pursuing their business with small capital, prominent merchants of the districts are contemplating to organize a cigarette factory. A petition asking the authorities to give the promoters necessary permit is said to have already been presented to the Provincial Government.

A considerable quantity of tea is produced at Ningyan, Tzuyang, Taian and Raiwu. But petty competition among the local tea producers has prevented the industry to make any headway. With a view to ameliorate the evil, influential parties are working to establish a company by combining the producers so that the output can be marketed at a greater profit. An application for the necessary official grant is also said to have been filed.

REFORM OF CHINA'S CURRENCY

PROPOSED LEGALISATION OF A SILVER STANDARD

As last something is to be done with regard to China's currency. A law has been drafted establishing a silver standard with a unit of 72 candareens nine-tenths fine. Before this issue reaches the reader the law—which is herewith reproduced—will probably have come into effect.

The higgledy-piggledy nature of the currency of China is one of the stumbling blocks to trade, and the efforts that have been made to bring about a substantial reform have from time to time been referred to in *FAR EASTERN REVIEW*. Briefly, the most substantial progress made towards some sort of finality was at the currency conferences held in 1911 at London, Paris, and Berlin, when Dr. Chen Chin-tao, Mr. Hsu Un-yuan, and Mr. Woo Nai-tsen represented China in discussions with representatives of the bankers of Great Britain, America, France and Germany, who were interested in the projected Currency Loan.

Dr. Chen Chin-tao presented to the conference the details of a proposal to unify the currency upon a silver basis, and after exhaustive discussion the scheme was approved by the Conference. Owing to the outbreak of the revolution towards the end of 1911 the proposals were not put into effect, and the development of ideas on the subject eventually brought about the appointment of a committee in the Ministry of Finance, in October, 1912, further to discuss the character of the standard which should be adopted. After 38 meetings that committee decided upon a gold exchange standard, but its recommendations—which were exclusively published in the *FAR EASTERN REVIEW*, in February, 1913,—were not adopted by the Government. In fact opposition rose to the gold-exchange standard, and advocates of a silver standard were able to make their voices heard with the result that in February, 1913, the President issued a Mandate appointing three commissioners, Messrs. Hsu Un-yuan, Daqueen Tao, and Wong Hung-U to make thorough investigations and discuss fully and seriously the questions of standard and unit and the methods to be adopted to carry out a reform. The result was not final, as different views were held as to the most advantageous standard, and in November, 1913, the Premier, Mr. Hsiung Hsih-ling, appointed another commission of which he was the Chairman, Mr. Liang Chih-chiao, the Vice-Chairman, and a membership composed of Mr. Tang, President of the Bank of China; the Director of the Mint; the Chief of the Currency Department of the Board of Finance, and Mr. Hsu Un-yuan, who had previously written a paper, published in the *FAR EASTERN REVIEW*, in May, 1913, advocating a silver standard. This Committee thoroughly discussed the whole question, and

decided that a gold-exchange standard was not suited for China in her present condition. They brought forward the proposal for a silver standard with a unit of 72 candareens nine-tenths fine—similar to the currency now in circulation—and drafted the proposed laws which are herewith published. Their recommendations were discussed by the Cabinet and after several meetings a final discussion took place in the presence of the President when the proposed laws were agreed to. On January 17 they were

placed before a conference of the members of the committee and the foreign advisers when the silver standard was unanimously agreed to, and, after a discussion in which a change of the unit was proposed, the unit of 72 candareens was also agreed to. The next step will be the promulgation of the laws by the President, unless the foreign bankers who are negotiating an agreement for the flotation of the currency loan, raise objections. As the silver standard was originally agreed to in the discussions held with the bankers in Europe it is hardly likely that questions will be raised now, unless there is some special motive for doing so.

Although the silver standard has been adopted the committee lays it down, and the Cabinet endorses the condition, that it is but a temporary measure, by reason of the fact that China must adopt the gold standard eventually. The silver standard is, they say, but a "ferry-boat" to reach the better standard later. A gold-exchange or gold standard is impossible at this period, and "some standard being better than none" it is prudent to adopt the silver standard to begin with. The gold standard cannot be adopted at this juncture, the committee explains, because the amount of gold in China is not enough to make gold coins for circulation; the cost of purchasing gold from abroad

would be too heavy, and, furthermore, the amount of silver which would be left upon the hands of the country by purchasing gold "would cause a panic in the financial world." A potent argument is that "it is the temperament of the Chinese people to hoard precious metals, and if they see gold coins which are attractive they will keep them if they are financially able to do so," and thereby put them out of circulation.

The unit of 72 candareens with a nine-tenths fineness was fixed upon because "it is the most suitable from the standpoint of practicability." The people of the country have become accustomed to calculating the medium of exchange in the term of the dollar, and that dollar weighs 72 candareens. The weight has also been adopted by the mints of the country for many years. According to the report of the Ministry of Finance the dollars turned out by the various mints now amount to more than



MR. HSIUNG HSIH-LING, Premier and Minister of Finance.



MR. LIANG CHIH-CHIAO, Minister of Justice and Vice-Chairman of the last Currency Committee

200,000,000. It would, therefore, "be best to utilise the existing coins and employ them as reserves for exchange, so that during the period when the amount of new coins is not sufficient for general circulation there will be something which will act as substitutes." At the present rate of operation the mints of China can make but 500,000 dollars per day, and the committee calculate that the making of new moulds and improvement in machinery would take up so much time that it would be more than two years before they could mint 100,000,000 silver *yuan*s, the name of the new coin. The 200,000,000 dollar coins now in circulation will be, therefore, useful while new coins are being made.

The scheme will be instituted first in the Treaty ports and afterwards in the interior.

The following is the text of the regulations devised by the committee and approved by the Cabinet and President:—

National Coinage Law

- Art. 1. The rights of minting and of issuing the national coinage shall belong solely to Government.
- Art. 2. The monetary unit shall be called the "Yuan" which shall contain six *tsien* (mace), four *fen* (candareen) and eight *li* of a *k'uping* tael or 23.97795048 grammes of pure silver.
- Art. 3. The different coins shall be of the following kinds:
- SILVER COINS, FOUR KINDS:
1. One Yuan coins.
 2. Fifty-cent coins.
 3. Twenty-cent coins.
 4. Ten-cent coins.
- NICKEL COIN, ONE KIND:
1. Five-cent coins.
- COPPER COINS, FIVE KINDS:
1. Two-cent coins.
 2. One-cent coins.

3. Five-mill coins.
 4. Two-mill coins.
 5. One-mill coins.
- Art. 4. The National Coinage shall be based on the decimal system. One-tenth of a Yuan shall be called the "Choh" or dime; one-hundredth of a Yuan shall be called a "Fen" or cent; and one-thousandth of a Yuan shall be called a "Li" or mill. All exchanges public and private must be based on this.
- Art. 5. The weight and fineness of the different coins shall be as follows:
1. One Yuan silver coins: the total weight of a one-Yuan coin shall be 7 *tsien* and 2 *fen* of a *k'uping* tael and its fineness shall be 90 per cent. silver and 10 per cent. copper.
 2. Fifty-cent silver coins: the total weight of one fifty-cent coin shall be 3 *tsien*, 2 *fen* and 4 *li* of a *k'uping* tael and its fineness shall be 70 per cent. silver and 30 per cent. copper.
 3. Twenty-cent silver coins: the total weight of one twenty-cent coin shall be 1 *tsien* and 2 *fen* of a *k'uping* tael and its fineness shall be 70 per cent. silver and 30 per cent. copper.
 4. Ten-cent silver coins: the total weight of one ten-cent coin shall be 6 *fen* of a *k'uping* tael and its fineness shall be 70 per cent. silver and 30 per cent. copper.
 5. Five-cent Nickel coins: the total weight of a five-cent coin shall be 7 *fen* of a *k'uping* tael and its fineness shall be 25 per cent. nickel and 75 per cent. copper.
 6. Two-cent copper coins: the total weight of one two-cent coin shall be 2 *tsien* and 8 *fen* of a *k'uping* tael and its fineness shall be 95 per cent. copper, 4 per cent. tin and 1 per cent. zinc.
 7. One-cent copper coins: the total weight of one-cent copper coin shall be 1 *tsien* and 8 *fen* of a *k'uping* tael and its fineness shall be 95 per cent. copper, 4 per cent. tin and 1 per cent. zinc.
 8. Five-mill copper coins: the total weight of one five-mill copper coin shall be 9 *fen* of a *k'uping* tael and its fineness shall be 95 per cent. copper, 4 per cent. tin and 1 per cent. zinc.
 9. Two-mill copper coins: the total weight of one two-mill coin shall be 4 *fen* and 5 *li* of a *k'uping* tael and its fineness shall be 95 per cent. copper, 4 per cent. tin and 1 per cent. zinc.
 10. One-mill copper coins: the total weight of one one-mill coin shall be 2 *fen* and 5 *li* of a *k'uping* tael and its fineness shall be 95 per cent. copper, 4 per cent. tin and 1 per cent. zinc.
- Art. 6. The standard silver Yuan shall be legal tender to any amount in any one payment.
- The fifty-cent silver coin shall be legal tender up to 20 Yuans worth in any one payment.
- The twenty-cent and ten-cent silver coins shall be legal tender up to 5 Yuans worth in any one payment.
- The nickel and copper coins shall be legal tender up to one Yuan worth in any one payment.
- The above limitations are not applicable in the payment of taxes to the Government and in the exchange of coins at the Government Bank.
- Art. 7. The designs of the national coins shall be decided and proclaimed by Presidential Order.
- Art. 8. The weight of a silver coin of any denomination shall not differ from its prescribed legal weight by more than 3/1000. One thousand of any of the silver coins of the same denomination weighed together shall not differ from their total legal weight by more than 3/10000.
- Art. 9. The fineness of any of the silver coins of any denomination shall not differ from its prescribed legal standard of fineness by more than 3/1000.
- Art. 10. When a silver Yuan has been reduced in weight by natural abrasion through use to the extent of one per cent. of its



DR. CHEN CHIU-TAO, China's foremost authority on currency questions and at present China's representative in Europe on financial matters.



MR. HSU UN-YUAN, Director of the Department of Trade, Currency, Banking and Public Loans.

prescribed legal weight, and when any of the subsidiary coins, whether of silver, nickel or copper has been so reduced in weight to the extent of 5 per cent. of its legal weight, they may be taken to the Government Offices to be exchanged for new coins according to their face value.

- Art. 11. No one shall be compelled to accept any coin which has been intentionally and fraudulently defaced or mutilated.
- Art. 12. The Government must coin in the form of Yuan for all those who may tender silver bullion at a charge of 6 li of a k'uping tael per Yuan.
- Art. 13. The date when the above regulations shall come into force shall be decided and proclaimed by Presidential Order.

SPECIAL REGULATIONS FOR THE EXECUTION OF THE NATIONAL COINAGE LAW

- Art. 1. All official receipts and disbursements shall be made in the national coinage, except those specially exempted by the present Regulations.
- Art. 2. The Government shall exchange all old dollars with the national coinage in order to have the former re-minted. But within a certain period the old dollars may continue to circulate and will be considered to have the same value as the new Yuans. The said period shall be decided and proclaimed by Presidential Order.
- Art. 3. All the silver and copper cash shall be withdrawn by the Government with the National coinage so as to have them re-minted, but within a certain period, they may continue to circulate at their market value. The public offices at different localities shall publish a monthly market rate of the old coins at which all official receipts shall be made. The monthly rate shall be made from the average rate of the preceeding month of the locality. The said period shall be decided and proclaimed by Presidential Order.

- Art. 4. All those who tender silver bullion to pay their taxes or duties to the Government or to have it coined into national coinage shall be allowed to do so at the rate of 6 tsien, 5 fen and 4 li of a k'uping tael of pure silver for one Yuan. But silver bullion having a standard of fineness different from the k'uping tael shall be rated according to the annexed "table of conversion."
- Art. 5. In places where official receipts and disbursements are made in silver bullion or sycee, the provisions mentioned in Art. 4 are applicable and the various kinds of bullion or sycee so received or disbursed shall be rated in Yuan, according to the above-mentioned table of conversion. But in places where official receipts and disbursements were before made in copper cents or cash or sycee being first rated on cash which cash is again rated in dollars, the local public offices shall report the exact amount of the various kinds of coins so received or disbursed to the National Taxation Bureau and obtain the latter's approval before the required conversion is made.
- Art. 6. The provisions named in Arts. 4, 5 and 7 shall be applicable to all taxes which shall be reckoned down to "li." All units below "li" shall be reckoned in the following manner: all units below 4 shall be disregarded, but those above 5 shall be considered as one "li."
- Art. 7. All private debts recorded in sycee are to be converted into Yuan according to the annexed table of conversion. Those recorded in copper cents, cash, etc., are to be converted into Yuan according to the provisions of Art. 6. All bills, documents, etc., not so converted in Yuan shall be rated, in case of lawsuit, on the current rate of conversion, ruling on the day when the present Articles are proclaimed by Presidential Order.
- Art. 8. Throughout the Republic when the national coins are offered in payment, no matter who the person may be or what the account may be, the national coins must not be refused.
- Art. 9. Any one who infringes or violates the provisions of Art. 4 of the National Coinage Law or Art. 8 of the present Regulations may be accused in Court by the person concerned. After conviction a fine of over \$10 and below \$1,000 will be inflicted. Any officials and managers of public properties and undertakings who violate the above-mentioned Arts. may, after conviction, be inflicted with a fine of over \$50 and below \$3,000.
- Art. 10. The place and date of execution of the present articles shall be decided and proclaimed by Presidential Order.



MR. N. T. WOO, B.S., M.A. (WISCONSIN) PH.D., who has taken a prominent part in the Currency Reform movement.

NEW CAPITOL BUILDING FOR MANILA

The *Manila Daily Bulletin* reports that owing to the crowded condition of the assembly committee rooms at 158 Cabildo, and the Ayuntamiento, a movement is on foot in assembly circles to construct a new government building on the site opposite the Ayuntamiento, between the Intramuros fire station and the supreme court building. Speaker Osmena, it may be stated on good authority, is himself interested in the project and is endeavoring to have it carried out.

The site is the same one on which foundations are still in existence and are in perfect condition. The breaking out of an insurrection prevented the construction of the palace at that time, but the plans are still in the Ayuntamiento and could be easily modified to suit conditions to-day.

The plans for the building were designed by Alejandro Olang, a Filipino engineer. They show an extremely beautiful two-story stone building, slightly larger than the Ayuntamiento, with a court and garden in the center.

The cost of the building, as estimated by the Spanish engineers, was P243,823 Mexican crowns or pesos. Since that time prices of construction and material have risen a great deal and it is probable that this estimate to-day is too low by at least 100 per cent.

Originally the governor's palace stood on the site selected for the new building. It was destroyed by an earthquake in 1863. The foundations now there were laid for a new and far more magnificent palace to replace the destroyed structure.

It is the plan of the assembly to utilize the new building as a capitol until the Burnham plan is carried out and the large capitol on Burnham Green is erected. After that time, the Ayuntamiento is to be converted into the city hall and the new structure is to be transformed into a museum.

THE COAL FIELDS OF CHINA

An interesting paper upon the mineral production and resources of China has been contributed to the Transactions of the American Institute of Mining Engineers by Mr. Thomas T. Read, formerly Professor of Metallurgy at the Imperial Pci-Yang University, Tientsin. This paper contains much useful information regarding the little that is known of the immense coal reserves of China. That information should be wanting upon this subject is not surprising, because China has not, so far, recognized any necessity for the development of her mineral resources either by her own people or by foreigners. Her coalfields are numerous and widely scattered, and contain generally coal of good quality—anthracite, semi-anthracite, bituminous, semi-bituminous, and lignite.

In the province of Manchuria the principal coalfield is that of Fushun, near Mukden, which is said to contain 800 millions of tons of workable coal. The province of Chihli contains numerous coalfields, and is the most important producer at the present time. The coals are anthracite, bituminous coal, and lignite. The province of Shantung contains anthracite and bituminous coal. The most famous coal areas are in the province of Shansi. There are two regions—the anthracite and the bituminous. The principal seam in the anthracite area is from 12ft. to 30ft. thick, and persists over wide areas, and the bituminous area contains good workable seams. It has been estimated that the anthracite resources of this province amount to 630,000 millions of tons, while the bituminous resources are said to be even greater. The province of Shensi contains both anthracite and bituminous coal, and that of Honan contains an extension of the Shansi anthracite field. The Great Southern coalfield, which possesses good bituminous coking coal and anthracite, is in the provinces of Hunan and Kiangsi, and there is an immense coal area in the province of Szechuan, though information regarding it is conflicting.

Generally speaking the coal resources of China, both as regards extent and quality, are considered to compare favorably with those of the United States of America.

OIL IN BRITISH NORTH BORNEO

Borneo has attained an important position as an oil-bearing territory, and its importance appears to be growing, says *The Times*, London, and continues:—For a long time production on a commercial scale was confined to Dutch Borneo, including Tarakan Island, from which the Royal Dutch Petroleum Company obtained 212,000 tons of oil in 1912. Now, however, British Borneo is coming to the front. The whole of the petroleum rights in British North Borneo, about 30,000 square miles in extent, are owned by the British Borneo Petroleum Syndicate, a company registered about 18 months ago as a reconstruction of a former Borneo and Burma syndicate. Its concessions give it the right to lease all oil-bearing land

at a peppercorn rent and free of royalty or export duty. On the western coast of North Borneo, is situated the Klias peninsula, where as a result of careful prospecting, 440 square miles of oil-bearing land have been taken up. The authorized capital of the British Borneo Syndicate being only £120,000 in 10s. shares, of which about £65,000 has been subscribed, the energetic exploitation of so large an area was clearly beyond its financial resources. Hence the co-operation of the Netherlands Colonial Petroleum Company, which is closely connected with the Standard Oil Company of America, was obtained, and an arrangement entered into by which the latter undertook the development work, including drilling in the Klias peninsula, and is under an obligation to spend a large sum on these operations, the British Borneo Syndicate receiving a substantial royalty on all the oil produced.

The Sarawak (British) country which has been prospected and developed by the Royal Dutch and Shell Companies (through the Anglo-Saxon Petroleum Company), has but recently justified the expectations of those who firmly believed in its oil riches. It is, in fact, only within the past month or so that the developing companies have had their hope and patience rewarded with results from the producing wells at Miri. These, we are told, are very satisfactory. The Miri production is additionally important in its connection with British enterprise, because the wells are close to Brunei, where the new development to which we are about to refer centres. It should first be mentioned that there are oil outcrops on Sebetik Island, off the south-eastern extremity of North Borneo. This island is half British and half Dutch. The petroleum rights of the British half were originally held by the British Borneo Syndicate, who sold them to the Sibetik Petroleum Company of Amsterdam, the consideration being an allotment of £72,916 fully-paid shares in that undertaking. The Sibetik Company will receive a royalty on all oil produced by the Royal Dutch Company, which has undertaken the exploitation of the deposits and is now sinking the first well.



MR. DAQUEEN TAO, B.A., who was a member of the Currency Reform Commission.

It is, however, Brunei, in the north-west of Sarawak, that is the pivot of immediate interest. The British Borneo Syndicate holds the petroleum rights between the Barram and the Tutong rivers, over a territory consisting of 19 square miles, held on lease, and 150 square miles held on prospecting leases. The rights for the rest of Brunei belong to the Royal Dutch and Shell Companies. The syndicate's territory contains oil-bearing formation similar to that of the adjacent Miri oilfield in Sarawak, which is proving so satisfactory to the Dutch and Shell interests. Two wells are now being drilled on the area of the leases that have so far been taken up. The contiguity of the properties of the syndicate and the Shell Company in Brunei, and the similarity of the formation to that of Miri naturally pointed to an amalgamation of interests. It is proposed to effect this by means of a new Brunei Company which is to be formed, and the price it is to pay for the combined Brunei rights is 700,000 fully-paid shares of the nominal value of £1 each. In consideration of transferring its rights to this new company the British Borneo Syndicate will receive 400,000 of the shares; and in consideration of acting similarly with their own rights, also finding £150,000 for working capital for the new company, the Shell and Royal Dutch will receive 200,000 shares, the remaining 100,000 shares

going to intermediaries in Holland. It will be seen, therefore, that the British Borneo Syndicate's future revenue will depend upon—(1) the royalties paid by the Netherlands Colonial, otherwise the Standard Company; (2) the dividends on £72,916 fully-paid shares in the Sibetik Company; and (3) the dividends on £400,000 in the new Brunei company. The value of these interests will, of course, depend upon the results of the several enterprises. It is further stated that the syndicate has a reserve of unissued shares enabling it to find sufficient capital to provide and instal such pipe lines and storage tanks as the oil production may make necessary.

"MIRACULUM" GRAPHITE PAINT

The basis of "Miraculum" Graphite Paint is, as the name implies, a graphite of 98 per cent. pure carbon, which is prepared in an electric furnace at a temperature of 8,000° F. This graphite, while possessing the advantage of being a pigment which closely attaches itself to the coated surfaces, is an absolutely inert and neutral body, and being resistant to chemical action, is especially suitable as a base for a protective paint.

The covering power of "Miraculum" Graphite Paint is very great. One gallon weighs about 11½ lbs. and will cover 800 to 900 sq. feet on a smooth surface. Any enquiries concerning "Miraculum" Graphite Paint should be addressed to the makers, Messrs. J. Dampney & Co., Ltd., Bute Docks, Cardiff.

TARIFF REVISION IN CHINA

POINTS FROM SIR ROBERT BREDON'S ARTICLES

In a series of articles in the *Peking Gazette* Sir Robert Bredon presents facts and arguments in regard to tariff revision. Following are some of the chief points made:—

"China, said the Chinese Commissioner, Sheng Hsuan-huai in 1901, can form no national budget entirely of her own motion."

"There were, he said, two separate and important components in taxation on foreign goods brought to China. First the maritime duty....and secondly the transit and inland duties."

"His purpose was in principle to begin taking the general idea sanctioned by the Boxer protocol as a basis and in accordance with it revising the tariff so as to make it the effective 5% on the value of imported goods which had always been acknowledged as the rate of China's tax on foreign produce: then it was suggested, in sequence, to add one and a half times the tax thus arrived at. The two and a half duties were supposed to represent, a 12.5% duty. In return for this payment China undertook that this duty once paid *no further duty of any kind soever* should be levied on foreign goods."

"The revision (sanctioned by the Boxer protocol) meant to give an effective 5 per cent., gave in reality a tariff which only brought in about 4½ per cent. on the then actual value of trade. It thus inflicted an injustice on China from the very start, an injustice which has continued and grown during the dozen years the tariff has been in force."

According to the treaties:

"Both tariffs (export and import) are on a five per cent. *ad valorem* basis, and both are held as being liable to be revised on the demand of either side interested, every ten years."

"Up till 1901 there had been no real revision of either the import of export tariffs, though varieties of readings and interpretations and such like may have made slight alterations from time to time."

"This is therefore now the position. China says to the Powers:—I am entitled, on a well understood principle which you all have admitted, to have a 5% tax on foreign imports: I am similarly entitled to claim decennial revision from each of you if I consider a tariff made over ten years ago no longer gives me my due. It is more than ten years since my import, and more than fifty since my export tariff has been revised. These are now both equally entitled to a decennial revision: I feel that revision is both necessary and due and I now ask you to undertake it in consultation with me as a matter of principle and justice—and she might add, and I don't expect any quibbling use of legal technicalities to stand in the way."

"China has already addressed a circular despatch to the Legations of all the Treaty Powers asking for revision." (The request has been acceded to in principle by Great Britain, the United States, Belgium and Holland.—*Ed.*)

"What is wanted is not merely a revision of the 1901 tariff but the re-establishment and the putting in practice of the old time tariff principles."

"The abolition of *likin* on any reasonable terms one can endorse as a change eminently desirable in every interest."

"The present export duty tariff has a two-fold character, first, though such does not appear at first sight, it is a tax no foreign trade fixed and recognised by Treaty, and as well, secondly, a tax representing a very old established tax on native produce carried coastwise."

"There is in China no Income Tax, no Death Duties, no Education Rate, no Country Cess, no Poor Rate, little or no even indirect consumption tax levied on the labourer through his liquor, tea, tobacco or sugar....Chinese export duty in China only represents to a certain extent an equivalent for the aggregate of other duties in Western countries."

"Article X of the British Treaty of 1842 provides that:—duty paid imported merchandise may be conveyed by Chinese merchants to any province or city in the interior of the Empire of China on paying a further amount as transit dues, which shall not exceed....per cent. on the tariff value of such goods.'....In a special convention made in Hongkong in June, 1842, it was stated

that the rates of transit duty:—'shall not exceed the present rates which are upon a moderate scale.'"

"When foreign goods have been entered at a port and paid full Import duty, they may be conveyed into the interior covered by a pass certifying payment of an additional half duty, which pass can be equally demanded by a Chinese or a foreigner, and is held as entitling the bearer to pass the goods at every tax station of whatever kind so long as the goods are actually in transit to a declared destination with (by recent legislation) permission to sell same en route in whole or in part at any place at which a market can be found, provided certain formalities have been complied with and native local authorities properly notified."

"In the opinion of the writer the whole question of inland charges on foreign trade requires to be gone into not only in the interests of the trade but of honest administration in China. There are wrongs on both sides and a settlement on a 'give and take by both' principle is desirable."

"Even if China does not now suggest the abolition (of inland taxation on goods) it should be proposed—one might be permitted to use the word 'demanded'—as a necessary concomitant of any treaty revision. Such a demand is by no means unreasonable, for China has herself in the preamble of Article VIII of the British Treaty of 1901 admitted its reasonableness in the following terms:—'The Chinese Government recognising that the system of levying *likin* and other dues on goods at the place of production, in transit and at destination, impedes the free circulation of commodities and injures the interest of trade, hereby undertake to discard completely those means of raising revenue with the limitation mentioned in Section 8.'"

"Article VIII established certain principles:—(1.) That China was prepared for total abolition of inland taxation on foreign goods in return for an import surtax. (2.) That Great Britain was willing to agree to and support the Chinese arrangement, and, we may hope, did so in the belief that it could be carried out. (3.) That a surtax to an extent of 7½ per cent. *ad valorem* was not considered unreasonable or likely to be an unbearable burden on British trade."

"The following few figures will, the writer thinks, give a fair estimate of what the Customs revenue would be if the Import tariff is raised to an effective 5% and the 7% surtax imposed. The net figures may be taken as what would be actual net total available from Inspectorate collected taxes for repayment of loan charges, etc. The figures which are in every case merely round numbers near the actual totals given in Part I of the Returns of Trade, are close enough for our purpose."

Total Customs revenue for 1912	Tls. 40,000,000
Add for surtax	32,000,000
Add for effective 5% say	7,000,000
Total	79,000,000
Deduct opium duty	1,800,000
Deduct opium <i>likin</i>	4,400,000
(This assumes the extinction of the trade).	
Transit Dues	2,000,000
(which the surtax replaces)	
Tonnage Dues	1,400,000
(otherwise used).	
Cost Inspectorate of collection (Chinese Superintendency and Administration) say	5,000,000
Additional cost involved in collection of surtax and increased accounting work of Customs	3,000,000
Total Deductions	18,000,000
Net	61,000,000

Above figures do not make any allowance for what a revision of the export tariff, or an export surtax or some other tax in lieu of that taxation may bring in; nor for the additional revenue such as may be expected from a growing foreign trade."

"The most important consideration in any new system is to reduce to a minimum the number of separate collecting departments and to cut down the staffs of those established to a minimum. The old system of finding berths for the unemployed and keeping them in them—still unemployed—should be entirely discountenanced. It seems there will be certain collectorates or departments of collectorates which must be controlled by representatives of the Central Government and directly responsible to it. In these may be included the Customs, the Salt, the Railways, Posts and Telegraphs, Irrigation works, River Conservancy, Woods and Forests and perhaps others. But all provincial taxes, including the Land Tax, which have to be collected on the beggarman's system, from door to door, should be aggregated into a single payment and collected periodically by one single provincial collectorate as is done in the United States where State, City and County taxes all pass into the same Treasurer's hands and are apportioned to the several spending departments as the constitution and law provides."

DETAILED DESCRIPTION OF THE ANGER IMPROVED AUTOMATIC BRAKE ADJUSTER

A very clever and effective device which has lately been brought out by Mr. John Edward Anger, Inventor and General Manager of one of the largest car-building Companies in England, and which is owned and controlled by the Anger Manufacturing and Supply Company, whose registered offices are in the Bank Chambers, 38 Fishergate, Preston, Lancashire, England, is called the Anger Improved Automatic Brake Adjuster.

This device is not quite two years on the market, and is being adopted by most of the principal tramways in the United Kingdom, as well as in many foreign countries.

This device is absolutely automatic, and is designed to work on any type of truck either single or bogie, no matter what type of platform brake gear is used, as it does not necessitate any alterations or changes in any parts of the truck or braking arrangement to properly instal it on any type of truck.

It is a well known fact that all tramcars after their service during the day have to be brought to the car depôt and the brakes adjusted during the night, and the wear of the shoes taken up and the shoes replaced in their proper relation to the wheels ready for the next day's labors. Oftentimes



The Man with the Wrench.

when the traffic is heavy and the brakes are used very often in the day, the shoes become worn more than ordinary and the cars have to sometimes be returned to the depôt for this slack in the shoes to be taken up and adjusted, or men sent out on the road to do this work by hand; either way is a big cost in the operation of cars, and oftentimes it is considerable loss of revenue if the cars have to be taken from service to have this work done.

Again this hand adjustment is oftentimes neglected, and it is always more or less inaccurate and unreliable, with the consequence cars are often put into service with the brakes improperly adjusted, so that the motorman or driver does not at all times know that when he uses his brakes, he will have the proper application of all four shoes to the wheels and in consequence he does not have the proper control of his brakes.

When the Anger Improved Automatic Brake Adjuster is installed it automatically takes up the wear of the brake blocks or shoes when the wear takes place, while the cars are in service, and when the time comes to take the cars to the depôt for the night, the brakes are already adjusted, and the cars are ready for the next day's work, and no hand adjustment is therefore necessary.



Anger Adjuster on Single Truck Narrow Gauge.



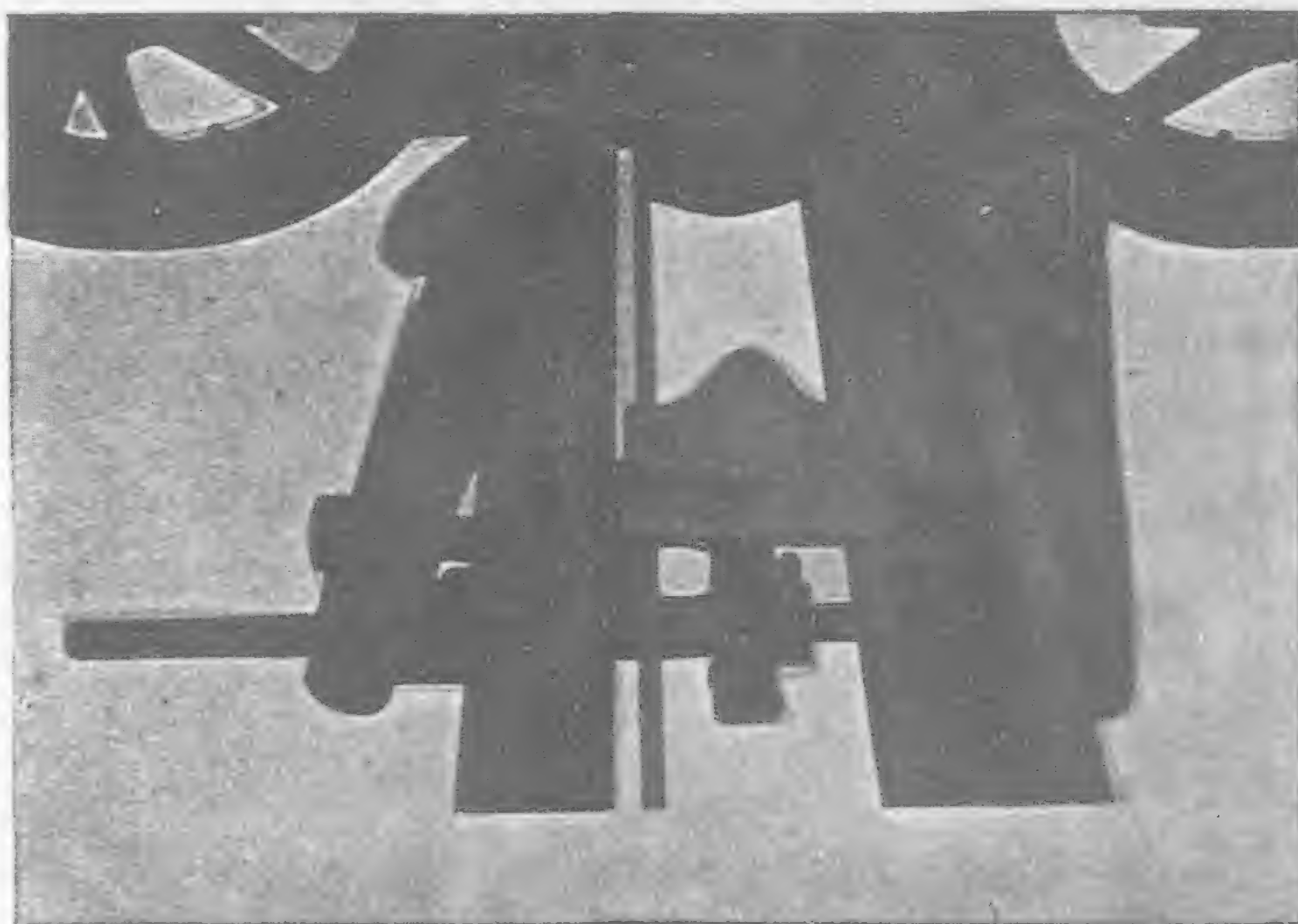
Adjuster on Single Truck Standard Gauge.

When the Anger Automatic Brake Adjuster is put on, it absolutely eliminates the dependence upon this hand adjustment, and the brakes are at all times kept in perfect adjustment, and the motorman or driver knows and feels at all times that his brakes are in order and effective as they should be.

This question of adjusting of brakes and the shoes as they wear is one of the most important parts of safety operation of tramcars, for inaccurate adjustment does not give the assurance to the motorman that he should have, and the car is never under absolute control.

This Brake Adjuster was examined by the English Board of Trade after a series of trials and experiments, and it was found to be a very positive, reliable and dependable device, and permission was given for its use on all tramways in the Kingdom.

It is a known fact to all tramway managers and engineers that automatic brake adjustment eliminates many car house faults. It also gives a safety in the operation of cars that cannot be obtained in any other manner. A single accident which does occur when it is least expected costs more than brake adjusters, and this device is now called a safety and necessary acquisition to the equipment, if for nothing more than the assurance and safety that it gives.



Adjuster on Bogie Truck.

It can be easily seen by its accurate, positive and reliable automatic adjustment, that the shoes are at all times kept the proper distance from the wheels. It prevents the shoes from dragging on the wheels, which is another fault always found with the hand adjustment, and it therefore not only gives a safety to the operation of the car, which is the most important factor, but it saves shoes and current, as well as labor, which in themselves are items of great importance to the maintenance of tramways.

By actual tests under all conditions it has been found that the Anger Brake Adjuster will pay for itself in 90 days, so the cost of the apparatus is very low, and having so very few parts, and being so simply constructed, there is practically no maintenance.

It is a well known fact that to have a device of this kind to obtain the automatic principle, the device must be operated in the equipment at a point nearest to where the slack in the shoes take place from the wear, and this device is placed on the brake rods on single trucks, and on the turnbuckle on bogie trucks, which is the nearest place to where the adjustment has to be done, and is the only correct place mechanically to adjust or take up the wear of the shoes.

We give cuts of the device, showing it in actual service on trucks, as well as cuts of the construction of the device, and a plan showing its method of application, and by referring to these, we feel sure it will be found a very interesting subject, especially as automatic brake adjustment is at this time now receiving the attention of engineers in nearly every part of the globe, wherever tramways are operated.

By referring to the plan, which is shown of the adjuster on a single truck, it will be noticed the following is a description of the principal parts. The adjuster itself is simply composed of two ratchet boxes, an upper and lower operating rod, and a fulcrum bracket. This is practically all that comprises the adjuster, but of course different parts have to be furnished with the adjuster itself according to the type of truck it is put on.

A. This is the ordinary brake lever on a single truck.

B. This is the operating rod attached to the fulcrum casting which is bolted into the brake lever and the other end of this rod is attached to the lugs of the adjuster itself used for operating same.

B.I. This is the fulcrum bracket with a lip on same to take the rod.

C. This is the top connecting rod which is used to connect both adjusters, as an adjuster is located on each rod, and this connecting rod actuates both adjusters simultaneously.

D. This is the threaded nut, which is made of phosphor bronze, which prevents corroding on the brake rods when working on same. It is enclosed in a casing, which is dirt and mud proof and prevents it being interfered with.

E & E.I. This is the box and cover or called the casing and cover which holds the threaded nut or ratchet and which also carries the little pawl.

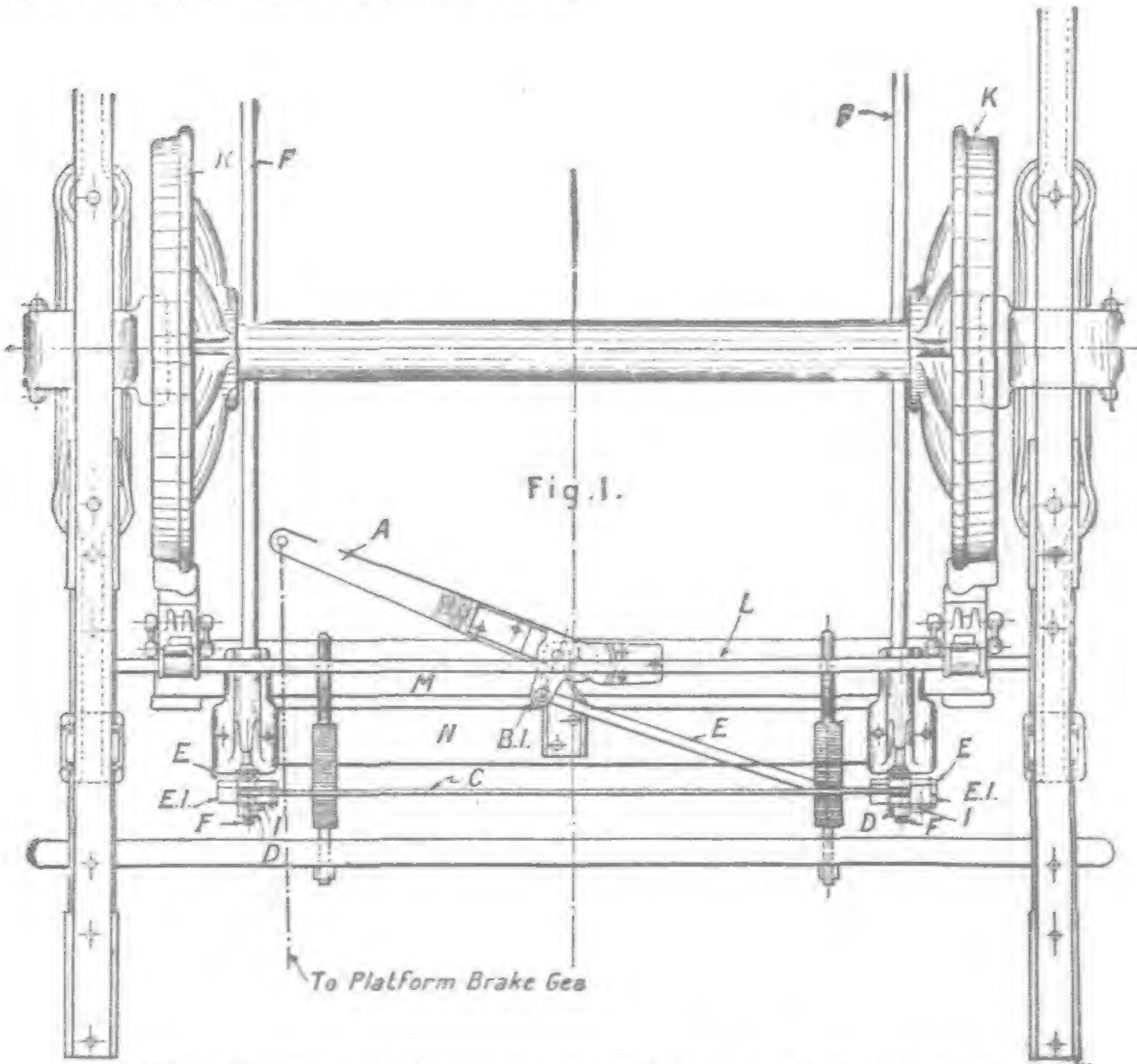
F. These are the ordinary brake rods which are on a truck.

G. This is the little pawl which engages in the ratchet wheel.

H. This is the ratchet wheel which is fitted into the nut.

I. This is the thumb lever outside of the adjuster which is used to disengage the ratchet so the adjuster can be wound back in the replacing of shoes, making it unnecessary to take the apparatus apart to replace the shoes. In this manner the pawl is disengaged, the adjuster can be wound back, the old shoes replaced with new ones, the adjuster wound back to its original position, and the adjuster is then ready for its operation again.

J. This is the spring which holds the pawl in place and always engaged into the teeth of the ratchet wheel.



Plan View of Adjuster showing Method of Application.

K. These are the ordinary nuts on the brake rods which are used for the old adjustment, which are simply replaced by the adjuster. It will therefore be seen the adjuster simply takes the place of the ordinary hand nuts, and it is therefore called the Man with the Wrench but Always on Duty. The adjuster simply takes the place of the night man with the wrench, but by being automatic is more accurate, and absolutely dependable, safe and sure at all times, while the cars are in operation.

L. This is the truck end bar on the usual trucks.

M & N. These are the ordinary brake beams on the truck.

The mode of operation is very simple as will be seen. In the application of the brake, the brake lever A or live lever is drawn outward, which causes the connecting rod B to move the casing or box E & E.I. in the direction of the arrow. Should the live lever A or brake lever be allowed to travel farther than a certain point (which travel is always caused by the wear of the shoes) the casing E & E.I. which carries the pawl G will travel on the ratchet nut D, the pawl engaging with same, and upon the brakes being released, and the brake lever A or live lever returning to its normal position, the ratchet H will be moved forward one tooth and thereby tighten up on the brake rods F to the amount of the wear that has taken place, and allowed this extra travel of the brake lever A.

The operation is always in one direction, and this winding process keeps the shoes replaced as soon as they wear to their proper relations to the wheels.

An important point to note is that this brake adjuster does not come into operation every time the brakes are used, but only as the wear of the shoes take place, and the moment the shoes have the slightest wear, the adjuster takes this up automatically.

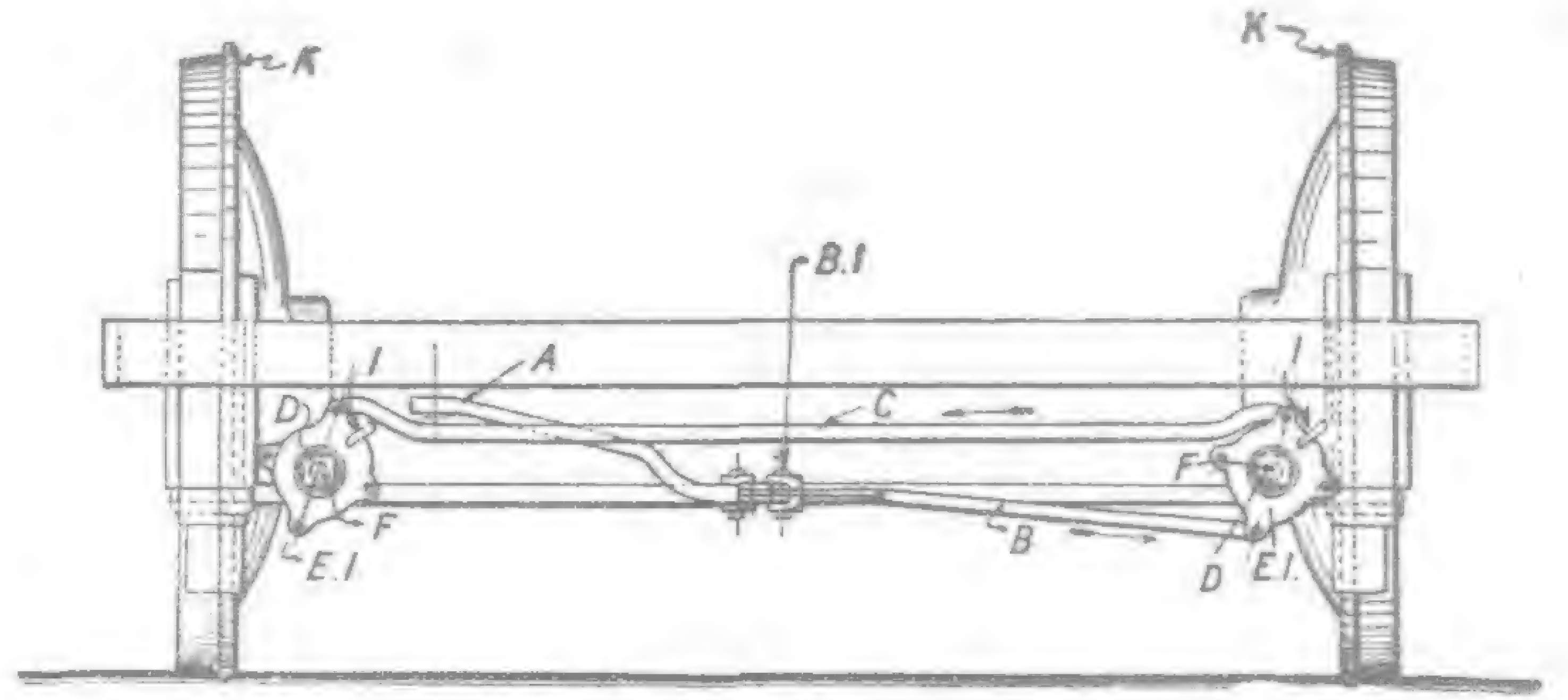


Fig. 2.
End View of Adjuster on Single Truck.

There are brake adjusters which are simply a more convenient form of hand adjustment, but the Anger Device eliminates the hand adjustment absolutely.

Thus it will be seen that it does not matter how many times the motorman or driver uses his brakes, it does not affect the brake adjuster for it simply means that this Anger Device simply governs the predetermined travel of the brake lever, and only operates when the brake lever comes to a certain point caused by the wear of the shoes.

Thus by this device governing the predetermined travel of the live lever, the brake lever can never pass its center at any time, and thus its leverage can never be spent, and the motorman or driver can at all times have perfect braking results, and will at all times have a quick and positive application of all four shoes to the wheels, and thus perfect control of his car.

This device can be used where air brakes are used, for it has nothing to do with the air brake, for it will be seen that if air brake are used and a brake adjuster is used on the piston, this does not adjust the wear of the shoes, and simply adjusts the travel of the piston, and the brake shoes have to be adjusted just the same by hand, whereas if the Anger Improved Automatic Brake Adjuster is used, as it governs the brake lever, which is the vital part of the braking mechanism, no piston regulator of adjuster is required, as the piston travel will always be properly regulated if the brake lever is cared for and the brake shoes as they wear taken care of. When a piston adjuster is used, if you want automatic brake adjustment in order to eliminate the hand adjustment, you have to have a device to adjust the wear of the shoes.

This operation of the Anger device goes on continually until the shoes are worn out. When the shoes are worn out, and new shoes are to be replaced, it is not necessary to uncouple any part of the device but simply press down the pawl handle, when the adjuster becomes the simple nut, unwind, replace the shoes and wind up and go on same as before, so the replacement of shoes is as simple, if not simpler than the old method.

Another feature of the Anger device is that when once put on a truck the shoes can be kept as close to the wheels as may be desired or they can be kept as far away from the wheels as required, for a fulcrum bracket is used, which enables this adjustment to be had.

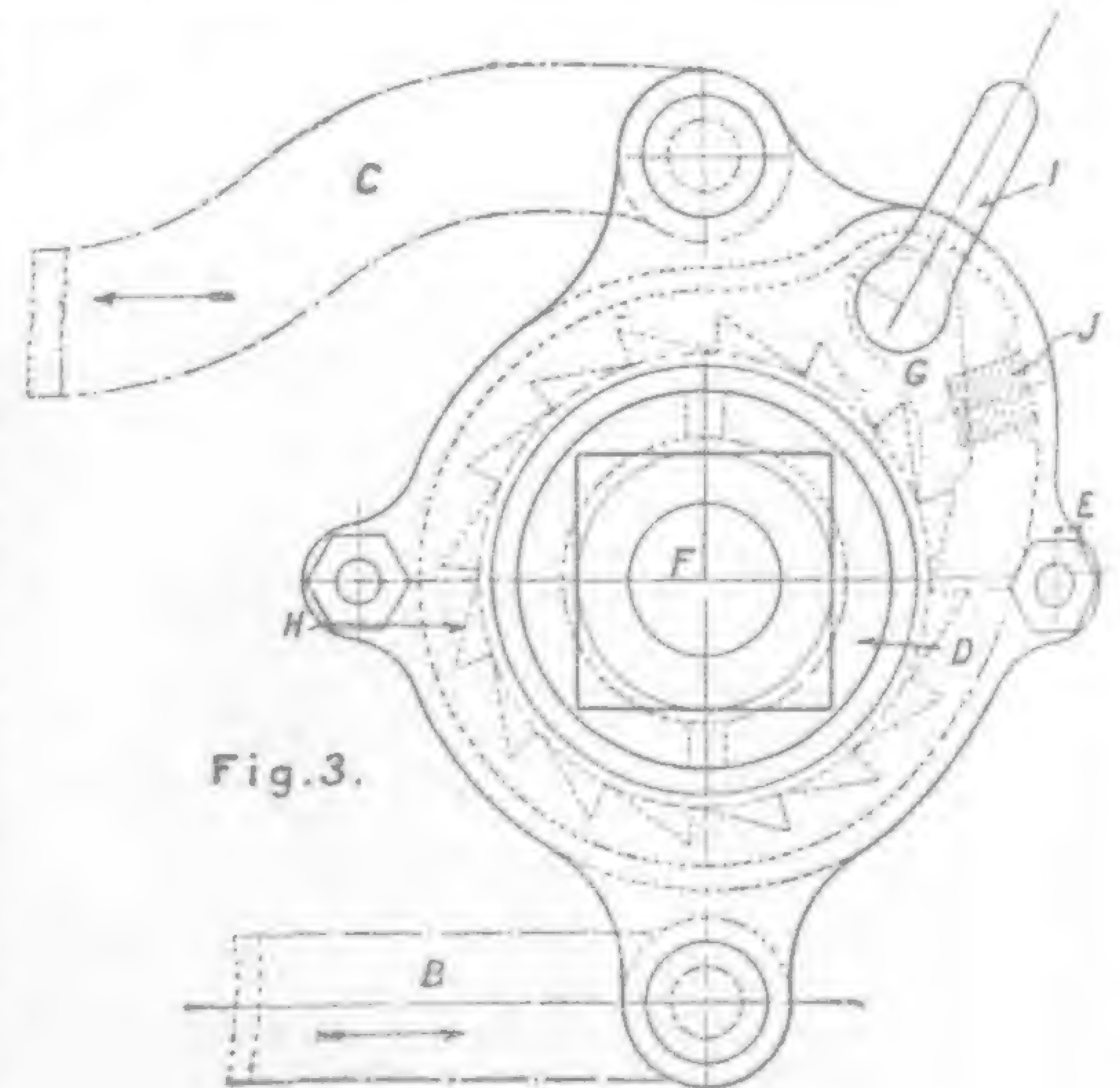
It will be noticed that at the fulcrum bracket where the operating rod is attached, the farther out this attachment is made to the lips of the fulcrum bracket the quicker the adjuster comes into action with the least amount of travel of the brake lever, thus the shoes are kept closer to the wheels, and the closer in this attachment is made to the large hole or pivoted point, the farther away the shoes are kept from the wheels, but whatever distance the shoes are adjusted from the wheels in the beginning, this distance will always be maintained at all times, until the shoes are worn out. Thus an even wear is always obtained in the blocks, and a great saving can be had.

This Anger Device is not expensive. It is very reasonable, and only one set is required to a single truck.

As stated before it is not yet two years on the market, and it is now used by all the most important tramways in England:—

In foreign countries it is in use in Para, Rio de Janeiro, Santos, Brazil. In Cordoba, La Plata, Buenos Aires, Rosario, Argentina, on all of the roads in South Africa, and many roads in Australia and New Zealand, as well as in Canada, and the United States.

It is also in use on many systems in Japan, and on the Hongkong Tramways, and Shanghai Tramways.



Interior View of Adjuster.

FAR EASTERN RAILWAYS

CHINA

Kaohsien Mining Railway.—The Ministry of Finance has issued a notice offering the Kaohsien Mining Railway at Fangshan, near Liulibo, Chihli, for sale. The buildings and all property pertaining to the line are included in the deal. The minimum price named is Tls. 2,400,000. The money is to be paid in twelve annual instalments, but the purchaser must pay one-fourth of the whole sum during the first year. The notice specifies that only Chinese citizens may send in applications, and that no foreign capital will be admitted. A Peking paper announced towards the end of January that Mr. Yuan Chung-chih, former expectant Taotai of Chihli, has taken over the Line from the Government. This railway has been sold to a Company of which Mr. Yuan is the head.

Prospective New Railways.—The Ministry of Communications, reports a Peking paper, has been planning to extend the railway from Peking to Jehol and from Jehol to Chihfeng through Shunyi. The length of the extension is more than 700 li. After the Changsui line has been completed, the railway from Chihfeng to Dolonor and Chaoyang will be built. The whole line is about 1,400 li long. Another line from Kalgan to Urga, about 2,400 li long, will also be constructed.

Peking-Hankow Line.—The main station of the Peking railway at Hankow is likely to be moved from its present position behind the French Concession, though no definite decision on the matter has yet been reached, says the *Central China Post*. Another scheme that has been considered is the building of a big terminal at Kilometre Ten, with up-to-date apparatus for the transference of cargo from the trains to shipping in the river and *vice versa*. Such a terminal would be almost indispensable for the transshipment of goods from the Peking line to the Canton line, when the latter is opened.

The New German Lines.—The Tsingtao correspondent of the *North-China Daily News* wrote on January 13:—The recent agreements with the Chinese Government, whereby the railway line to Ichowfu and beyond is to be built from Taingtao, is of great importance to Tsingtao. An outlet in this direction to reach the south-western part of the province, and develop its possibilities for both imports and exports, has been for years a crying need. In this respect it does not seem of less importance than the main line to Tsinanfu, the capital. One has always felt that it was a misfortune for Tsingtao commercially, that the previous concession for building this railway was transferred to the Chinese in exchange for the privilege of building the northern end of the Tientsin-Pukow railway. This very important region has consequently been left for many years now, with very little development, whereas it might have been by this time a very important and efficient feeder of this port.

The line from Tsinanfu west, connecting with the Peking-Hankow railway will of course be important, and a good business venture for the promoters, but whether it will greatly benefit Tsingtao is perhaps questionable. The great natural advantages of the port are, however, certain to give it a good share of the general benefits of railway development.

Anking Chengyangkwan Line.—The following is from the *Peking Daily News*:—The project of building a railway from Anking to Chengyangkwan was initiated during April,

1913, by Kuan Peng, a person who was involved in the Kiangsi rebellion last year. At the moment of inception, the scheme was criticised by the press as being impractical. Subsequent developments raised the suspicion that the promoters were trying to make use of the railway for an improper purpose.

The Ministry of Communications has received another petition regarding this railway from the Chengyangkwan Chamber of Commerce. In replying to this petition, the Ministry objected to the building of this line, on the ground that it interfered with the Pukow-Singyang Railway. As the Chamber of Commerce alluded to the flotation of a foreign loan, the Ministry pointed out that business men were not allowed to borrow foreign capital to build railways. The Tutuh of Anhui has been asked by a despatch to prohibit the exploitation of illegitimate profit by utilizing the name of this project.

Ningpo-Hangchowfu Line.—A correspondent wrote from Shaohingfu on January 19 as follows:—The Railway from Ningpo to Hangchowfu—the provincial Capital—is not yet finished by a long way. The Ningpo side is more enterprising and energetic in carrying out their contracts than this Shaohing side. The road is brought from Ningpo to near a large market town called Pah-kuan, at which place they will have to erect a Bridge across the Dzaungo River, a river which runs parallel with the Tsien-tang river, and both of which enter the Hangchow Bay, and both of which are affected by the tidal-wave which comes up from that Bay. Both rivers will have to be crossed by railway bridges, as the line is to run from Ningpo to Hangchow direct, thence to Shanghai, and, perhaps, they will eventually make on the line to run up the Tsien-tang on to Chuchowfu, and on to Yuohshan, and to connect with the Fuchow and Canton Railway. I can get no definite information re the opening of the railway from this to the native port of Si-shing, and over the river to Hangchow City. To-day we hear one talking and laying it down in good order and in great assurance that the opening and finishing of the long looked for railroad is not far off! The next day, the very opposite view is stated by another and with great confidence also.

Ichang-Szechuan Line.—Writing from Ichang on January 16 a correspondent says:—It is reported here that arrangements have now been made for the resumption of work on the Hankow-Szechuan Railway. It may be remembered that the section from here to Wanhsien had been started by the Szechuan Railway Co., and good work was put in for about a couple of years. Then the revolution came along, and it had all to be stopped, and since that things have been going to wreck and ruin, through exposure and the want of care. Some months ago a band of American engineers arrived to undertake fresh surveys and make an estimate of the cost of what had been already done. This must have been accomplished satisfactorily, and if it is true, as reported, that work on the construction of the line is to be resumed after the Chinese New Year, it will make this a busy port, as there will be lots of railway material to be transported here for use in the building of the line.

The German engineers are still surveying the Hankow-Ichang section of the same line, and things must now be quiet since that untoward incident that happened at Pan Yue San.

Railways for Fukien.—Admiral Liu Kuan-hsiung has petitioned the President Yuan Shih-kai for the provision of Railways in Fukien. It the course of the petition he

says:—“Upon investigation we have found that sometime ago the Fukien merchants collected shares for the construction of a line from Amoy to Changchow as an experiment. However the financial strength of the merchants failed and the construction was stopped before the line was completed. It has been recently reported that the said Company has requested the Government to buy the line. The proposal of the said Company to yield to Government ownership is indeed a wise and liberal step. This trunk line will effect a connection with three other lines, namely, Kuangtung, Chekiang and Kiangsi; and an estimate of its length is no less than two or three thousand li. Not to mention the difficulties in connection with the raising of funds among the merchants, the policy of the Government ownership, which has been decided upon, will not allow the people to construct railways along with the Government's. If for the construction of this line, additional taxes be levied on the people, it would no doubt incur their hatred before anything can be achieved. Surely this will not be done by our Government. We have arrived at the conclusion that the only means for to-day is to borrow money for the construction, and pledge the line as security. As Fukien is situated in a very secluded place, there are only one or two Powers who cherish any aggressive design regarding it, and the rest of the Powers have always been friendly. We can negotiate with the friendly Powers for a loan. In view of the undeveloped condition of the province and the poverty of its inhabitants, when nine out of the ten families are destitute of means of livelihood, and the officials stand helpless, the only salvation of the province is the construction of railways, on which will the life and death of the province depend. If the Government should hesitate to launch the plan, it would be useless to regret in the future. Furthermore this line is of very great importance to both Fukien and other neighbouring provinces. If it be immediately divided into sections and the work be started at once, it is but within our expectation that industry will be greatly developed, and the bad characters will be reduced. Thus all troubles both internal and external may be averted. The benefit will not only be reaped by this part alone in the South. With regard to the regulations for the conclusion of loans and the construction of the railway, it is requested that the Ministries concerned will be instructed to formulate them.”

Kiukiang-Nanchang Railway.—A correspondent writing from Kiukiang on December 27 said:—The task of completing the Nanchang (Nanchang-Kiukiang) Railway is being pushed on steadily, though hardly energetically. Quite recently a large quantity of bridging material was landed, which no doubt in the fulness of time will find its way to Teian, where it is badly needed. Two new locomotives, built by the American Locomotive Co., have also been acquired, while the lately erected brick engine shed is now ready for occupation. Optimists expect that through traffic to Nanchang will be instituted by the spring. “Tis a consummation devoutly to be wished.” In the meantime it is worth noting that a representative of the Railway is now in Peking endeavouring, if report be true, to induce the General Government to take over the enterprise, presumably not as a gift. Funds evidently are scarce, for the Nanchang authorities are now levying a railway (!) tax on native goods carried by junk from there to Kiukiang.

Shanghai-Hangchow Railways.—The Board of Communications from January 1 assumed control of the Kiangsu section of the Shanghai-Hangchow Railway, and this control is vested in Mr. Chung Mun-yew, Managing Director

of the Shanghai-Nanking Railway. The Shanghai-Hangchow Railway has been the subject of contentions, and was once a large factor in the struggle between Peking and the provinces for power. The local authorities strenuously objected to its being under the control of the capital, and ultimately the line came under the management of two bodies of shareholders, the Kiangsu and Chëkiang shareholders, to all intents and purposes two companies. The Kiangsu company has now gone into liquidation, and as a consequence the Government has taken over its section of the railway.

For a long time schemes have been afoot for the linking up of the Shanghai-Nanking and Shanghai-Hangchow Railways. The original intention was to build a line from Soochow to a place like Kashing, but nothing ever came of it. It is believed that fresh negotiations for linking up have been started, but for the time being the proposals are much less ambitious, a line from one of the stations near Shanghai, such as Chenju, Nansiang or Anting, being suggested to meet the Hangchow railway some distance past Lunghua. The situation is, however, still complicated by the opposition of the Chekiang shareholders to any suggestion of control by the Central Government over their part of the line. In Kiangsu the railway runs for a distance of only about thirty miles, by far the greater proportion being in the neighbouring province, and it is feared that negotiations cannot be satisfactorily carried through, until the objections from Chekiang have been overcome.

After the section of the railway from Shanghai to Hangchow was completed the scheme was to carry the line through to Ningpo. Work upon this section was started a considerable time ago, but up to the present all that has been accomplished is about forty miles open to traffic from the Ningpo end.

Projects.—It is reported that the French are pressing for the Yunnanfu-Chengtu railway concession with a view to linking up the railway from Tatung (Shansi) to Chengtu and the Hanoi-Yunnan system. This would give Franco-Belgian interests a valuable strategic connection across China between Kalgan and Hanoi. These lines would cross at Sianfu the Franco-Belgian railway from Lanchowfu to the coast. This last line is to terminate at Haimenting at the mouth of the Yangtse, the original terminus, Haichow, having proved unsuitable.

Since this was written the French have obtained an option on the Yunnanfu-Chungking railway.

Shanghai-Nanking Railway.—The following figures of traffic returns (approximately) for the week ended December 13 are issued by the Shanghai-Nanking Railway:—

Year.	Passen- gers.	Goods and Sundries	Total for the week.
	\$	\$	\$
1913	52,418	11,981	64,399
1912	41,608	9,758	51,366
Increase.	10,810	2,223	13,033
Decrease	—	—	—

For forty-nine weeks.

Year.	Passen- gers.	Goods and Sundries	Total
	\$	\$	\$
1913	2,326,468	504,344	2,830,812
1912	2,140,109	396,656	2,545,855
Increase.	177,269	107,688	284,957
Decrease	—	—	—

Week ended December 20.

Year.	Passen- gers.	Goods and Sundries.	Total for the week.
	\$	\$	\$
1913	50,224	11,899	62,123
1912	38,576	8,200	46,767
Increase	11,657	3,699	15,356
Decrease	—	—	—

Year.	Passen- gers.	Goods and Sundries	Total
	\$	\$	\$
1913....	2,376,692	516,243	2,892,935
1912....	2,187,766	404,856	2,592,622
Increase.	188,926	111,387	300,313
Decrease	—	—	—

For fifty weeks.

Year.	Passen- gers.	Goods and Sundries	Total for the week.
	\$	\$	\$
1914....	55,253	8,703	63,956
1913....	48,266	9,486	57,752
Increase.	6,987	—	6,204
Decrease	—	783	—

For twenty-six* weeks, 1913

Year.	Passen- gers.	Goods and Sundries.	Total.
	\$	\$	\$
1914....	1,239,378	261,437	1,500,815
1912....	1,060,539	248,483	1,309,022
Increase.	178,839	12,954	191,093
Decrease	—	—	—

* Owing to the alteration in the railway's fiscal year the totals to date have been altered to include figures as from July 1, 1913 only.

Week ended January 10.

Year.	Passen- gers.	Goods and Sundries.	Total for the week.
	\$	\$	\$
1914....	55,796	11,147	66,943
1913....	49,479	10,531	60,010
Increase.	6,317	616	6,933
Decrease	—	—	—

For twenty-eight weeks.

Year.	Passen- gers.	Goods and Sundries	Total
	\$	\$	\$
1914....	1,295,174	272,584	1,567,758
1913....	1,110,018	259,014	1,369,032
Increase.	185,156	13,570	198,726
Decrease	—	—	—

Week ended January 17.

Year.	Passen- gers.	Goods & Sundries.	Total for the week.
	\$	\$	\$
1914....	58,059	12,566	70,625
1913....	45,907	9,557	55,464
Increase.	12,152	3,009	15,161
Decrease.	—	—	—

For twenty-nine weeks.

Year.	Passen- gers.	Goods & Sundries.	Total.
	\$	\$	\$
1914....	1,353,233	285,150	1,638,383
1913....	1,155,925	268,571	1,424,496
Increase	197,308	16,579	213,887
Decrease	—	—	—

MANCHURIA

South Manchuria Railway Co.—It is said that in the programme of readjustments of the South Manchuria Railway Company an item is included to raise a foreign loan next spring to the amount of about 20,000,000 yen. A portion of the proceeds of the loan will meet the expenditure for the construction of the Szu-ping-chieh-Tao-nan-fu line and the remainder will cover the expenditures for the completion of the remaining section of the Kirin-Changchun line and for the surveying work of the Kirin-Hui-ning line. These railway works, however, will be started as several years' continuing undertakings and only a part of the loan will be expended in the first year of those railway undertakings. The remaining sum of the loan, therefore, will be deposited in the National Treasury and it will be diverted for the railway funds required in Japan proper in case of urgent need.

The monthly traffic returns for December last of the S. M. Railway reached Y.2,806,846, being

an increase by Y.241,912 on the corresponding month of the present year. The daily average for that month amounted to Y.90,543.

The aggregate traffic receipts since last April were Y.16,075,110, being an increase by Y.3,206,618 over the corresponding period of the previous year.

The *Manchuria Daily News* understands that the S. M. Railway management proposes to increase the passenger service on the Main Line between Dairen and Changchun by a daily through service by the end of the fiscal year 1914, viz., March 31st, 1915. At the same time the capacity of carrying freight is to be raised to the maximum capacity of 8,730 tons per day each way, and the average running mileage of coal trains to 90 miles a day.

The Railway Workshops at Shahokou are going to construct the first locomotives for the S. M. Railway upon materials ordered from England which are arriving at Dairen. Six locomotives will be completed by about next July, each costing about Y36,000, as against Y46,000 for one of English make and Y42,000 for one of American make. As the workmen acquire greater skill in this new line of work, the Workshops management expects to be able to reduce the expense of constructing a locomotive to only about 30 per cent. of the original cost.

The Workshops supplied the whole of materials for the two steel-trussed warehouses for erection at Antung, which cost about Y170,000.

South Manchuria Railway Feeders.—The Chinese gentry of Tiehling, represented by the chairmen of the Prefectural Assembly, the Chinese Guild, and the Town Council, have started a movement to have the western terminus of the proposed railway connecting Hailungcheng with the S. M. Railway shifted from Kaiyuan to Tiehling. It may be remembered that the need of constructing this railway line has been aired since 1909, and the question of the terminal station has remained a matter of bitter rivalry between Tiehling and Kaiyuan. With the recent revival of the railway scheme endorsed by the alleged Sino-Japanese Railway Loan agreement, the leading Chinese merchants of Tiehling have regarded with alarm the possibility of losing the terminal station in project to Kaiyuan.

The Japanese Government is pushing on negotiations for the settlement of minor details in connexion with the concession for the construction of five railways in Manchuria and Mongolia, says the *Asahi*, with a view to starting without delay the work of construction, for which preparations are being made. The other party to the negotiations being the Chinese Government, adds the *Osaka Journal*, the negotiations may not progress so rapidly as is desired by the Japanese Government; but the general arrangements are already made, and the English loan for the Paosing Railway has been signed. In these circumstances, not much difficulty is likely to be experienced in advancing Sino-Japanese negotiations. The construction of railways in Manchuria and Mongolia in winter is difficult, so the Government proposes to start work early next spring. The Taonanfu line will be first constructed to connect Cheng-chiatun with the South Manchuria Railway, the construction of other lines being taken in hand gradually.

According to the Chinese papers, the Japanese Government has proposed to the Government that two of the four lines conceded to Japan should be changed to run through some of the cities just opened to foreign trade by a Presidential Order, instead of passing through the cities as formerly decided upon. One of the two lines is the Changchun-Taonanfu Railway, which, according to the proposal, is to be started from Tienchiatun in Manchuria, passing through Chihfeng to Dolonor, and from Dolonor through Kalgan to Kweihua by a branch line. The other line is the Taonanfu-Jehol Railway, and the Japanese Government proposes that after reaching Chaoyang, the line, instead of running to Jehol, be changed to

go to Hututao. The Chinese papers comment that if the proposal is approved by the Chinese Government, the Japanese will control these cities commercially.

The *Chung Kuo Kung Pao* says that since the Japanese Government secured the right of building the four railways in Manchuria from China, the Japanese Minister in Peking has made arrangements with the Peking Government as follow:

1. Out of the four lines, the Shih-ping-chieh-Taonan and the Kaiyuan-Hailung lines should be constructed first.

2. The construction works will be entrusted to the South Manchurian Railway Company while the Yokohama Specie Bank will do the financing.

3. The estimated cost of building the two lines is \$20,000,000, to be supplied by the aforesaid Bank in two instalments.

4. The construction works will commence in April of this year and finish within six months so that the two lines may be opened to traffic before the end of 1914.

JAPAN

Profitable State Lines.—A responsible official of the Japanese Imperial Railways, quoted by the *Jiji*, remarks that the railway authorities estimated the net profit for the present fiscal year ending March next at ¥15,000,000, but the year's working has been profitable beyond their expectations. Even after deducting various unbudgeted expenses, the net profit for the year promises to show an increase of close upon ¥2,000,000 over the estimate. It is impossible to estimate the revenue for next year on the basis of this rate of increase, so in compiling the railway estimates for next year the net profit has been estimated at ¥17,400,000.

This year the Taisho Exhibition is to be held in Tokyo in the spring, and the Coronation ceremonies are to take place in the autumn. From these and other forthcoming activities a revival in business is anticipated this year, and a net profit of not less than ¥20,000,000 is expected from the railways. An understanding has been come to between the railway Bureau and the Finance Department that the increased profit over the estimates should be used for the expenditure on railway construction and improvement. If the same amount as for the present fiscal year is spared by the Finance Department for the purpose mentioned, the total amount available next year for this purpose will exceed ¥43,000,000. In this way the Imperial Railway authorities hope to be able to carry out the construction of new lines on a large scale.

Railway Extension.—It is understood that the Japanese Railway Board has, after repeated conferences, decided to complete seventeen lines with a combined mileage of 242 during 1914, as detailed below:—

Lines.	Sections.	Mileage.
Shinjo.....	Imadegawa-Kajiya	8.63
Taira	Koriyama-Mihoru	7.56
Taira	Taira-Nishigawa	6.55
Tokushima..	Kamada-Ikeda	25.27
Sendai	Kushikino-Sendai.....	7.33
Shinjo.....	Kiyekawa-Sakata.....	15.04
(for Freight only)	Sakata—the harbour	1.54
Ganetsu	Nozawa-Tsugawa	19.14
Murakami ..	Shibata-Chujo	8.08
Murakami ..	Chujo-Murakami	12.50
Taira	Mikame-Ono-Shinmachi ..	20.66
Hoji	Kisaradzu-Minato	14.62
Hamada	Oda-Ota	10.61
Tadotsu	Kwanonji-Kawanoya	9.62
Sayeki.....	Oita-Saisaki	11.58
LIGHT RAILWAYS.		
Yubetsu	Kakeshibe-Shimokitahara ..	18.00
Funakawa ..	Nita-Wakimoto	5.24
Nagai	Noshigo-Nagai	0.12
Miyagi	Kumamoto-Otsu	13.70
Miyagi	Otsu-Shimono	10.68
Inukai.....	Oita-Nakahanda	7.23
Total		242.47

CHOSEN (KOREA)

New Railways Open.—The Tajon-Mukpho line in Chosen has been completed and is now open to the public. The work was spread over a period of eleven years in the days of the late Superintendent-General Viscount Sone, but the period was shortened to six years upon the assumption of the Governor-Generalship by Count Terauchi. The line, with Tajon, Wonsan and Mukpho as termini, extends 175 miles and was constructed at a cost of 760,000 yen. The completion of this railway is calculated to contribute not a little to the exploitation of the natural resources in the Peninsula, since it runs through the four great fields, namely of Kankyong, Chongju, Kinche and Naju.

SIAM

The Northern Railway.—The British Vice-Consul at Nakawn Lampang (Mr. W. A. R. Wood) reports that he recently journeyed to that place from Chiangmai along the route of the proposed Northern Railway. This line will eventually connect Bangkok with Chiangmai, and is expected to be completed in 1918, but at present it is only open as far as Pak Chan, about 350 miles from Bangkok.

The general direction of the line follows the main caravan route from Phre to Chiangmai, but very considerable detours from it have been made in order to avoid very hilly districts. Consequently the whole route presents no very serious engineering difficulties, although there will be a tunnel 1,350 metres (1,470 yards) long at Khoon Tan, and a short tunnel, about 140 metres (153 yards) long, near Pang Puei. The Khoon Tan tunnel is being bored through practically solid granite, and although work is continuous (day and night) and blastings are made about every four hours, only an average depth of about one yard is excavated each day. Boring is being carried on at both ends on two tunnels, one above the other; the northern end has been excavated for 120 metres (130 yards), and the southern end for about 90 metres (98 yards). At this rate the two ends will not meet for at least 18 months, and it will, of course, be much longer before the upper and lower tunnels are properly joined up. As, however, the railhead is not expected to reach Khoon Tan until late in 1917, the tunnel will probably be completed by the time it is required.

The bridge across the Me Yome river at Pak Chan will not be properly finished until 1914 but, in spite of this, another section of the line—from Pak Chan to Pak Ta—will be open to traffic shortly, and a further section will be opened to Ban Pin about April, 1914.

H.M. Vice-Consul adds that he understands that a road suitable for motor traffic is to be constructed between Nan and Phre at a cost of 200,000 ticals (about £15,400).

Southern State Railways.—Construction work on the Southern Siamese State Railways has proceeded so satisfactorily that it was definitely decided to hand over to the Traffic Department on the 1st January, 1914, on the Trang side: Kao Kao—Tung Sawng Section (km 50—94) and on the Singora side: Singora—Patalung (km 1—90).

From the 1st of January therefore, daily trains for passengers and goods were run on both sides of the Peninsula for about 90 km.

The section Patalung-Ronphiboon-Tung Sawng should be ready at the latest by the 1st July, also the branch-line from Ronphiboon to Nakon Sri Tamarat, so that in about 6 months hence daily through trains should run from Trang via Tung Sawng to two ports on the East Coast of the Peninsula, viz., to Singora and to Nakon Sri Tamarat.

MALAYA

Siam-Federated Malay States System.—The *Bangkok Times* says:—The railway negotiations between Siam and the F.M.S. federal authorities have resulted in the amount available under the Southern Railway loan being increased by £750,000 at the same rate of 4 per cent. and in a decision to link up the Siamese line with the Kedah Railway. We learn from the Ministry of Communications that the Loan had to be increased to build the new line, but we fancy most of the increase will really be needed to complete the original project.

GENERAL

Burmah-China Railway.—At a meeting of the Manchester Chamber of Commerce on December 17 a paper was read by Mr. T. M. Ainscough on the proposed new railway across the Burmah-Chinese frontier from Bhamo to Tengyueh. He strongly advocated the making of the line, both on political and commercial grounds, and said that the development of the province of Yunnan would be advantageous to the trade of Lancashire. The chairman said that a memorial to the India Office had been suggested, but it was thought wise to hold it over until they had heard Mr. Ainscough's paper.

Mr. Ainscough first described the early explorations and commercial missions in this frontier region, and he said that so recently as 1875 adverse reports were made as to the possibility of establishing railway communication. One result of the extension of British rule to the Shan States in 1885 was the construction of the railway to Mandalay. Latter a scheme was formulated for the extension of the line into China by way of Kunlong. In March, 1903, the line was completed to Lashio, but the difficulty of continuing the track was so great no further progress had been made. Subsequently new surveys were made between Bhamo and Talifu—an important trade centre—via Tengyueh, and this time it was reported that the construction of a railway was feasible. It was believed that the first section, as far as Tengyueh, could be completed at the cost of £763,000, and that the local traffic would be sufficient to enable a dividend of 2 per cent. to be paid from the start. The remaining section would cost four and a half millions sterling, and the traffic prospects were not so good, but Mr. Ainscough expressed the opinion that a considerable development of trade, especially in cotton yarns and goods, would follow the construction of a railway.

Mr. Ainscough considered also that political reasons alone would justify the project, because France was seeking to extend her trade interests in Yunnan-fu. Another weighty consideration was the fact that goods which entered China by the French railway were subjected to heavy tariffs, which were not imposed on the merchandise entering by way of the existing Bhamo mule track. A great deal would depend on the attitude of the British Government as to the manner in which the scheme would be received by the Chinese authorities, and strong pressure from the British Legation at Peking would be helpful. He suggested that as a preliminary measure representations should be made to the Secretary of State for India setting forth the urgent need for the construction of the railway, both from the point of view of the welfare of Lancashire trade and of the interests of the Empire as a whole.

On January 17 it was reported that the British Government has approached China with reference to the construction of a railway from Burma to Tengyueh and Talifu. If the consent of the Chinese Government is obtained, states Reuter's Agency, it is believed that difficulties will arise with regard to financing and construction of the proposed line owing to the immense difficulties of the country through which the railway would have to pass.

Velfnelisk-Kiakhta Railway.—The branch line of the Siberia Railway running from Velfnelisk to Kiakhta, Mongolia, for 230 *vershs*, which it was said would be run under private control, has been placed under Government management. The total estimate for the extension work is 27,000,000 roubles, and 1,000,000 roubles will be appropriated the next fiscal year. This plan of financing the scheme has been approved by the Committee on Communications of the Lower House of the Duma.

The said branch first proposed to run from Kiakhta via Kulon to Changkiakou. But the distance to Changkiakou was found to be unexpectedly long, and therefore the cost to be greater. Furthermore, the country along the line as first proposed is almost desert, and promised no returns in traffic. For this economic reason, it was changed to the present plan.

TRAMWAYS

Peking Tram Co.—Chen Hsuan-chu, the promoter of the Peking Tramway Company, according to the *Peking Daily News*, has been accused of soliciting foreign capital for his company.

The Peking Chamber of Commerce has repeatedly sent petitions to the Ministry of Industry requesting that the Peking Tramway Company be dissolved as it is improperly organized. Minister Chang recently held a conference with the Ministers of the Interior and Communications, at which they discussed this matter. It was decided that the Metropolitan Police Court should be instructed to make investigations and find out whether there was any foundation for the accusations.

The Metropolitan Court has now requested the Chamber of Commerce to produce proofs substantiating the charges against the Tramway Company. The Court also sent a note to Chen Hsuan-chu ordering him to reply to the accusations, and to make full explanations regarding the organization of his company.

The Peking Chamber of Commerce held a meeting recently, which was attended by the delegates from fourteen sections of Peking city. The evidence against the promoter of the Tramway Company was assembled. It was afterwards decided to petition the various Ministries once more.

Accordingly, petitions were addressed to the Cabinet Office, the Ministries of Industry, of the Interior, and of Communications.

Two reasons were given why the Peking Tramway Company should be dissolved, namely:—(1) When the formation of the company was announced, the promoter declared that the construction work would commence six months afterwards, but one year has now elapsed, and yet nothing has been done in this direction. Although a little surveying has been attempted, it cannot be called construction work. (2) This company has never made any visible effort to raise capital among the Chinese merchants, which fact goes to prove that the capital now deposited with the Paoshang Bank, alleged to be more than one half of the total amount, must have come from a foreign source.

Shanghai Tramways.—The returns for the week ended December 17, are as under:—

	1913.	1912.
Effective receipts (after deducting loss by depreciation of subsidiary coinage)	17,102.85	14,610.10
Passengers carried.	808,390	737,247
Car miles run.	56,184	50,878

The loss by depreciation of subsidiary coinage for the week was \$4,880.16 equal to 23.51 per cent. of the gross cash collected on the cars as compared with \$3,988.18, equal to 22.91 per cent. for the corresponding week last year.

Week ended December 24.

	1913.	1912.
Effective receipts (after deducting loss by depreciation of subsidiary coinage)	17,647.08	15,190.67
Passengers carried.	920,337	753,588
Car miles run.	56,927	50,953

The loss by depreciation of subsidiary coinage for the week was \$5,024.90 equal to 23.43 per cent. of the gross cash collected on the cars as compared with \$4,108.72 equal to 22.68 per cent. for the corresponding week last year.

	1913.	1912.
Effective receipts (after deducting loss by depreciation of subsidiary coinage)	17,740.44	14,455.70
Passengers carried.	920,093	704,124
Car miles run.	56,927	47,974

The loss by depreciation of subsidiary coinage for the week was \$5,023.96 equal to 23.29 per cent. of the gross cash collected on the cars as compared with \$3,755.03 equal to 21.97 per cent. for the corresponding week last year.

Week ended January 7, 1914.

	1913.	1912.
Effective receipts (after deducting loss by depreciation of subsidiary coinage)	18,290.49	16,153.34
Passenger carried.	936,940	789,972
Car miles run.	57,062	51,363

The loss by depreciation of subsidiary coinage for the week was \$4,935.68 equal to 22.41 per cent. of the gross cash collected on the cars as compared with \$3,862.46 equal to 20.34 per cent. for the corresponding week last year.

Week ended January 14.

	1914.	1913.
Effective receipts (after deducting loss by depreciation of subsidiary coinage)	18,430.51	14,733.20
Passengers carried.	948,802	714,639
Car miles run.	57,330	50,489

The loss by depreciation of subsidiary coinage for the week was \$4,917.45 equal to 22.26 per cent. of the gross cash collected on the cars as compared with \$3,498.77 equal to 20.57 per cent. for the corresponding week last year.

Week ended January 21.

	1914.	1913.
Effective receipts (after deducting loss by depreciation of subsidiary coinage)	18,797.08	15,232.78
Passengers carried.	971,901	737,034
Car miles run.	58,847	49,445

The loss by depreciation of subsidiary coinage for the week was \$5,052.25 equal to 22.36 per cent. of the gross cash collected on the cars as compared with \$3,646.82, equal to 20.67 per cent. for the corresponding week last year.

Progress of Traffic

Year.	Passengers.	Gross receipts.	Loss by depreciation of subsidiary coinage.	Effective receipts per car mile.	Effective receipts per passenger.	Mex. cents.	Mex. cents.
1908*	7,823,002	344,488	50,812	19.30	3.75	19.30	3.75
1909.	11,722,715	557,629	116,088	22.31	3.76	22.31	3.76
1910.	18,751,215	701,282	155,184	27.36	2.91	27.36	2.91
1911.	27,257,250	805,211	168,848	28.39	2.33	28.39	2.33
1912.	40,734,233	1,037,206	239,374	29.04	1.95	29.04	1.95
1913.	47,686,648	1,179,865	258,809	31.94	1.93	31.94	1.93

*From March 5.

	Miles.	
	Double	Single
Length of track unchanged since opening, viz.,	9.16	7.15
Cars:—	1908	1913
Motors.....	65	67
Trailers	—	40
	65	107
Motors nearing completion.....		13
		120

HARBORS

New Dock at Hikojima.—The plan of the dock now being constructed by the Mitsui Bishi Co. at Hikojima, an island in the Shimonoseki Straits, has been extended from 270 feet to 350 feet in length. The extension has been approved by the Kure Port Admiralty. The dock is expected to be completed by June next.

SHIPBUILDING, ETC.

Hongkong and Whampoa Dock Co.—A Hongkong paper reports that the Hongkong and Whampoa Dock Company have just secured the contract for the building of a fine new steamer for the Straits Steamship Company.

The new vessel is to be one of 225 feet between perpendiculars with a beam of 36 feet. Her mean draught will be 9 feet 2 inches. The vessel, which is to be fitted with the latest appliances for loading and unloading cargo, will be provided with all modern conveniences. She will be a single-screw steamer of 11,000 tons horsepower and will have a speed of 11 knots. She will have two single-end boilers and one donkey boiler. The new steamer will have accommodation for 14 first class and 12 second class passengers. She is to be completed in about a year and will be a handsomely fitted vessel in every way.

A Hongkong paper reports that on January 8 the steamer *Tai Lee*, built for the Sze Yap S. S. Co., for service on the Canton and West River traffic by the Hongkong and Whampoa Dock Company, was successfully launched at Kowloon. The *Tai Lee* is a handsomely modelled steel twin-screw steamer classed to the American Bureau of Shipping, A. 1., 20 years, for bay and river service; also to Board of Trade. Her dimensions are 217 feet overall by 38 feet by 21 feet, moulded to main deck, and she will have a deadweight carrying capacity of 300 tons on a light draught. There are three decks, providing ample passenger accommodation; 28 European first-class on the upper and shade decks forward, 47 Chinese first-class amidships, and 158 second-class on the upper deck aft, whilst a large number of deck passengers are carried on the main deck. It may be mentioned that special attention has been given to the European first-class, six special staterooms and a dining saloon being placed at the foremost end of the deck. The position could scarcely be excelled as regards natural ventilation and coolness during the voyage. Throughout, the vessel is fitted with a complete system of electric lighting and fans. The propelling machinery consists of two sets of inverted direct acting, surface condensing, triple expansion engines, having cylinders 15 inch, 24 inch, and 30 inch diameter; stroke 26 inches, steam being supplied at 180 lbs. pressure by two large multitubular marine boilers working under Howden's system of forced draught, which, it is anticipated, will develop sufficient power for the fully laden service speed of 14 knots.

Japanese Activity.—A Japanese trade paper reports that private shipyards in Japan are now fairly busy. The tonnage of the vessels now under construction in different yards, which are eligible for the subsidy granted for the encouragement of shipbuilding, is as given below:—

Yards.	Gross-tonnage.	Owners.
Mitsu Bishi Nagasaki Yard	11,900	N.Y.K.
Mitsu Bishi Kobe Yard	1,500	ready made
Kawasaki Yard	5,700	O.S.K.
Osaka Iron Foundry	11,900	N.Y.K.
"	1,170	O.S.K.
"	1,550	"
"	3,200	"
"	3,200	"
Kuchiki Yard	1,415	"
Uraga Yard	2,200	"

They number 11 with a combined tonnage of 55,631 tons. Besides the N.Y.K. has petitioned the Government for the grant of subsidies on four cargo boats of 7,500 tons each to be built at the Mitsu Bishi Nagasaki Yard, and the Kawasaki Yard; and on two more cargo boats of 9,600 tons each to be ordered from the same yards. Early this year keels will be laid for two super-dreadnoughts of 30,600 tons each at the Kawasaki Shipyard, Kobe, and the Mitsu Bishi Shipyard, Nagasaki.

MINING

Kailan Mining Administration.—The total output of the Administration's mines for the week ended December 6, amounted to 52,034.70 tons, and the sales during the same period to 44,789.81 tons.

Week ended December 13 output 54,070.83 tons, sales, 50,228.58 tons.

Week ended December 20, output 52,878.53 tons, sales, 55,864.92.

Week ended December 27, output 54,263.56 tons, sales 37,397.06 tons.

Week ended January 3, 1914, output 55,297.90 sales 43,782.98 tons.

Week ended January 10, output 54,307.05 tons, sales 51,871.84 tons.

Coal in Iwate, Japan.—A report just received is to the effect that a great coal deposit has been discovered in the vicinity of Kuji, Iwate. Although it is an old story that an American resident of Yokohama came across a very rich mine of smokeless coal in the province almost fifteen years ago, the discovery relates to a much bigger one, located some distance from the port of Kuji. This deposit is also of the smokeless kind; and according to chemical analysis, it was great heating power. Mr. Kano, a mining engineer, has ascertained that there are more than twelve rich veins in it, which spread beneath a number of villages there. Another encouraging feature of it is that the exploitation of it will be a very easy matter, because it is in reach of many facilities of shipment. Also, it is stated that the Department of Agriculture and Commerce will soon send official prospectors to make an investigation.

A Kirin Colliery.—A Japanese paper reports that Mr. Chi and Mr. Wang, formerly of the Industrial Guild, Kirin, conjointly with Swiss capitalists, have applied for the concession to operate a colliery at Titaokou in Mishan Prefecture. The capital is to be S. yen 5,000,000, to be produced in equal shares between the Swiss and the Chinese promoters. In case of the Chinese side failing to raise the required amount, it is agreed that the Swiss capitalists shall advance the deficit.

Penchihu Colliery and Mining Co.—The *Manchuria Daily News* reports that the Penchihu Colliery and Mining Co., which is capitalized at \$4,000,000 (one-half for the Colliery and the other half for iron mining and

steel works) has already completed the foundation work for installing a smelting furnace which is expected to arrive about next July. The new furnace will be brought into service near the end of the current year. The management hopes to refer to the general meeting of the shareholders in the coming spring the proposed further increase of the capital by \$2,000,000. One of the chief investments of the new capital will be the installation of a second smelting furnace. The programme of extension will be consummated with the increase of the capital to the total of \$3,000,000 and the installation of a third smelting furnace.

FINANCIAL

Industrial Loans in China.—The following regulations have been drawn up by Mr. Chang Chien, Minister of Agriculture and Commerce in conjunction with the Ministries of Foreign Affairs and Finance, concerning the flotation of industrial loans from foreign capitalists in the various Provinces:—

1. Previous to the flotation of any foreign loan for the development of a certain industry, the Chief Civil Administrator of the Province concerned must first report in detail to the Ministry of Agriculture and Commerce about the existing condition of the industrial enterprise, the plans of the borrowers and its future prospects after the entry of foreign money. No negotiations for any foreign loan are permitted until the petitioners have received authority from this Ministry.

2. The amount of the proposed foreign loan should only be sufficient to develop the industry specified in the petition of the borrowers who must present their estimates and prospectus to this Ministry for inspection and approval.

3. Industrial loans should not be used as administrative expenditure by the borrower. Not only this, but the borrowers are not permitted to misappropriate them for any other industrial purposes.

4. Previous to the signature of the draft agreement for any industrial loan, the borrowers must present them to this Ministry for examination in conjunction with the Ministries of Foreign Affairs and of Finance which will give their permission if they find there is nothing objectionable in them. The borrowers can only sign the agreements after they have received permission from the Central Government.

Hongkong and Shanghai Bank.—Subject to audit, the following are the results for the half-year:

Dividend	£2. 0. 0
Bonus in addition to dividend	£0. 5. 0
Added to Silver Reserve	\$200,000
Written off Bank Premises Account	\$300,000
Carried forward to next half year	
about	\$2,050,000

Japan's Foreign Trade.—The Japanese Department of Agriculture and Commerce has published the following figures in regard to the foreign trade in 1913:—

	yen.		
Exports	630,345,000	1913	Comparison
Imports	729,209,000	1912	(all increase)
Excess of Imports	98,864,000		
Compared with the previous year the value of exports increased by 105,725,000 yen (20.01%), imports by 110,495,000 yen (17.8%), and the excess of imports by 4,770,000 yen (5.6%).			
The totals are given in thousands of yen as follows:—			
Exports	630,345	524,620	105,725
Imports	729,209	618,714	110,495
Total	1,359,554	1,143,334	216,220
Excess of Imports	98,864	94,094	4,770

Of the exports cotton yarns, fabrics and raw silk showed the largest increases over the previous year, and more or less increase was also observed in copper, timber, coal, refined sugar, fish oil, fancy mattings, umbrellas, earthen-ware, and dried cuttle fish. Refined tea, straw braid (for hat making), matches, waste silk, camphor, and rice have more or less decreased.

Raw cotton, rice, fertilizers, machinery and sugar are the chief increases in the imports, and some increase is seen in wheat, beans, flour, hemp, iron tubes, woollen fabrics, papers, etc., while wool, leather, iron plate, calico, kerosene oil, and nails all decreased compared with the previous year.

The total public debt as it stood at the end of last December was 2,562,422,931.74 yen,—1,067,103,386 yen domestic and 1,495,318,931.74 yen foreign. During the month of December, 90,850 yen was newly borrowed, and 357,449.76 yen redeemed.

Foreign Capital in China.—The *Japan Mail* says:—The Powers have of late been making investments in China in emulation of one another. According to the latest investigation the amount of the capital invested in China by the Powers is as follows:

	Central Loan.	Local Loan
	Yen.	Yen.
Great Britain	374,543,250	23,380,000
Germany	240,763,250	16,000,000
France	147,837,361	4,620,000
Russia	108,837,361	—
Belgium	29,066,666	210,000
U. S. A.	16,000,000	37,380,000
Japan	60,670,000	2,420,000
Other countries	643,154,840	11,870,000

(We do not vouch for the accuracy of these figures.—Ed. F. E. R.)

Japan's Foreign Loans.—The Japanese railway loans negotiated in London and Paris last year to the amount of Y.10,000,000 fall due on March 14 next, and the Government has been sounding the financial position in Europe through the Franco-Japanese Bank and Mr. Mori, the Japanese Financial Commissioner in London. The *Osaka Mainichi* states that the Government has entered upon negotiations for the conversion of the railway loans, and also for a loan to the Japan Hypothec Bank. A syndicate of French capitalists has agreed to undertake the issue of bonds for Y.55,000,000—Y.15,000,000 for the Hypothec Bank and Y.40,000,000 for the railway fund. Some of the terms of the issue still remain unsettled, and the bonds may not be on the market before the middle of March.

Reported Sinkiang Loan.—A Peking paper reports that Tutuh Yang of Sinkiang with the sanction of the Government and the endorsement of the Provincial Assembly, signed a temporary agreement for a new loan of \$15,000,000 with representatives of London bankers.

The loan agreement consists of seventeen Articles, the most important of which are as follow:—

(1). Within the month after the formal agreement is signed, one-tenth of the whole amount will be delivered, and the balance will be delivered in three instalments within six months.

(2). The said loan shall be invested in mine developing, land opening and in promotion of industrial enterprises, and not be turned towards the Executive expenses.

(3). Net proceeds, 92.

(4). Interest, 6 per cent. per year.

(5). Securities, the Domestic Animal Tax of the whole province of Sinkiang amounting to 700,000 dollars. If the said Tax is found not sufficient, the deficiency will be met with other taxes.

COMPANIES

Japan Gas Co.—The following are the accounts for the last term:—

Net profits for the term ... Y 41,696.97
Brought over from last account ... 22,467.55

Total ... 64,164.53

To be distributed:—

Legal reserve ... 2,100.00
Bonuses for directors and auditors ... 4,000.00
Pension reserve ... 1,000.00
Sinking fund for fixed capital, etc ... 10,000.00
Dividend at 8 per cent ... 36,000.00
Carried forward to next account ... 11,064.53

Tokyo Muslin Co.—The profits made for the last term were distributed as follows:—

Net profits for the term ... Y 216,264.09
Legal reserve ... 10,000.00
Loss reserve ... 20,000.00
Dividend equalization fund ... 10,000.00
Bonuses for directors and auditors ... 18,500.00
Dividend at 10 per cent. ... 75,000.00
Special dividend at 2 per cent. ... 15,000.00
Carried forward to next account ... 27,764.00

Dai Nippon Sugar Refining Co.—The following are the accounts for the last term:—

Net profit for the term ... Y 1,114,812
Brought over from last account ... 519,373

Total ... 1,634,185

To be distributed:—

Legal reserve ... 60,000
Secondary reserve ... 250,000
Fund for depreciation in Dairi factory ... 250,000
Pension reserve ... 15,000
Bonuses ... 85,000
Dividend at 8 per cent. ... 444,000
Carried forward to next account ... 530,185

Kinugawa Japan Water Power Co.—The following are the accounts for the last term:—

Net profits for the term ... Y. 357,634.94
Brought over from last account ... 28,477.47

Total ... 386,112.41

To be distributed:—

Legal reserve ... 18,000.00
Loss reserve ... 18,000.00
Bonuses for directors and auditors ... 17,000.00
Dividend at 7 per cent. ... 303,750.00
Carried forward to next account ... 29,362.41

Brazilian Immigration Co. (Japan).—During the last term the profit made totalled Y 6,077.58, which has been carried forward to next account.

Tokyo Rice and Commodities Exchange.—The profits made for the last term were distributed as follows:—

Net profits for the term ... Y. 140,471.16
Brought over from last account ... 4,957.24

Total ... 145,428.40

Loss reserve ... 7,300.00
Bonuses for directors and auditors ... 7,250.00
Dividend at 11½ per cent. ... 120,600.00
Carried forward to next account ... 1,278.40

Sino-Japanese Cotton Spinning Co.—The following are the accounts for the last term:—

Net profits for the term ... Y 200,400.00
Brought over from last account ... 75,000.00

Total ... 275,400.00

This latter amount is to be disposed of in the following manner:—

Legal reserve ... 12,000.00
Secondary reserve ... 22,000.00
Bonuses for directors and auditors ... 10,000.00
Dividend at 8 per cent. ... 140,000.00
Carried forward to next account ... 91,400.00

Hakodate (Japan) Water Power Co.—The following are the accounts for the last term:—

Net profits for the term ... Y. 104,541.86
Brought over from last account ... 13,542.07

Total ... 118,083.93

To be distributed:—

Loss reserve ... 5,228.00
Secondary reserve ... 10,455.00
Bonuses for directors and auditors ... 8,900.00
Dividend at 10 per cent. ... 66,250.00
Carried forward to next account ... 27,250.93

Sino-Japanese Flour Milling Co.—The following are the accounts for the last term:—

Net profits for the term ... Y 68,179.58
Brought over from last account ... 42,027.87

Total ... 110,207.45

Legal reserve ... 3,500.00
Loss reserve ... 10,000.00
Bonuses ... 5,500.00
Dividend at 10 per cent. ... 56,300.00
Carried forward to next account ... 34,907.45

Japan Paint Manufacturing Co.—The following are the accounts for the last term:—

Net profits for the term ... Y 118,354.00
Brought over from last account ... 36,127.00

Total ... 154,481.00

To be distributed:—

Legal reserve ... 5,918.00
Sinking fund for fixed capital ... 20,000.00
Bonuses ... 11,835.00
Dividend at 16 per cent. ... 88,000.00
Carried to next account ... 28,728.00

Katsuragawa (Japan) Water Power Co.—The following is the profit and loss account for the last term:—

Net profit for the term ... Y 170,691.93

To be distributed:—

Reserve ... 8,550.00
Secondary Reserve ... 8,550.00
Bonuses for directors, auditors and downward ... 5,000.00
Dividend at 5 per cent. ... 140,000.00
Sinking fund for promotion expenses ... 7,826.15
Carried forward to next account ... 765.77

Culty Dairy Co., Ltd. (Shanghai).—The profit and loss account for the year ended October, 31, 1913, showed a profits on the year's working of Taels 16,930.71. After writing off the loss on last year's account, amounting to Taels 9,087.37. Discount to Shareholders on their milk bills of Taels 1,367.47, and making full provision for bad and doubtful debts, there was a balance of Taels 4,217.32, which was dealt with as follows:—

To write off 10% Depreciation on Buildings Account ... 1,686.48
To write off 20% Depreciation Dairy Accessories Account ... 953.14
To carry forward to next year's account ... 1,577.70

Japan Cotton Spinning Co.—The following is the profit and loss account for the last term:—

Net profits for the term ... Y 450,736.00
Brought over from last account ... 118,736.00

Total ... 569,472.00

To be distributed:—

Sinking fund for fixed capital ... 120,315.00
Bonuses ... 45,000.00
Reserve ... 60,000.00
Dividend ... 220,000.00
Carried forward to next account ... 124,152.00

Fukushima (Japan) Cotton Spinning Co.—The following is the profit and loss account for the last term:—

Net profits for the term ... Y 489,666.00
Brought over from last account ... 194,403.00

Total ... 684,069.00

To be distributed:—

Reserve for depreciation in the property ... 120,000.00
Bonuses for directors and auditors ... 24,000.00
Reserve ... 100,000.00
Loss reserve ... 50,000.00
Fund for the protection of operatives ... 10,000.00
Dividend at 26 per cent. ... 176,312.50
Carried forward to next account ... 203,757.00

Eastern Smelting Co., Ltd., Penang.—The Penang Board of Directors have received cabled advices from the Directors of the Company in London as follows:—

The net profit earned by the Company for the year ended 31st August 1913 is ... £25,693
to which must be added the balance of Appropriation Account for the previous year ... 28,053
£53,746

After deducting

Dividend paid last year £18,000
Bonuses paid last year ... 1,838
Depreciation to 31st August 1913 ... 4,450
Income Tax for year ending 31.8.13 ... 1,214
Interim Dividend of 1/- (5%) paid on the Preferred Ordinary Shares on 26th August 1913 ... 2,500 28,002

There remains a balance of £25,744

The Directors did not advise the declaration of a dividend on the ordinary shares. A final dividend on the Preference Shares at the rate of 1/- per share (5 per cent.), less Income Tax would be payable on the 2nd January, 1914. This would absorb £2,500, and consequently there would be a balance of £23,244 to be carried forward to next account.

Kung Yik Cotton Spinning and Weaving Co., Ltd.—The Consulting Committee of this Company, decided that the shareholders should be recommended to apportion the balance at credit of Profit and Loss account on November 30, 1913, of Tls. 195,399.40 as follows:—

Tls.
To pay a dividend of Tls. 1.50 per share on 75,000 shares ... 112,500.00
" write off Buildings ... 10,000.00
" write off Plant and Machinery ... 25,000.00
" write off Furniture ... 282.97
" place to Equalization of Dividend Account ... 37,500.00
" pay a Bonus to Staff at Mill ... 1,500.00
" carry forward to new account ... 8,616.43
Tls ... 195,399.40

New Philippine Incorporations.—A company has been formed at Manila under the name of "The First Manila Hat and Umbrella Factories" with a capital stock of P.800,000 divided into 6,000 shares of preferred stock at a par value of P.50 each, and 5,000 shares of common stock at a par value of P.100 each. Of the capital stock P.550,000 worth has been subscribed to and fully paid in P.250,000 being preferred and P.300,000 common. The organizers and stockholders are H. A. Gsell, of Paris, and Carlos Gsell of Manila, who hold P.125,000 worth of preferred stock and 149,000 worth of common stock each, Charles Ott, who has P.17,000 of common stock, and G. K. Lingler, M. Geissmann, and F. A. Kretzschmar, with one share of common stock each. According to the incorporation papers, the interest on the preferred stock shall not exceed nine per cent. per annum. Profits will be apportioned among the preferred stockholders first. Should any be left after such distribution they will be divided among holders of common stock pro rata. In case of liquidation, the assets of the company will be first applied to the holders of preferred stock.

PANAMA-PACIFIC INTERNATIONAL EXPOSITION.

RAPID PROGRESS OF CONSTRUCTION WORK.

A correspondent writing from San Francisco says:—

Ten huge exhibit palaces are under construction at the grounds of the Panama-Pacific Exposition. Between 3,500 and 4,000 men are employed. Hundreds of teams are scattered over the site. The exposition management operates its own railway throughout the grounds and steamers are kept busy delivering lumber to awaiting freight cars. Twenty million feet of lumber are already piled upon the grounds or are in place in the buildings. The main exhibit palaces will alone require sixty million feet of lumber. Despite the magnitude of the work the observant visitor may note the advance in construction each working day. The buildings are assembled upon a schedule that will bring them to completion months before the formal opening of the exposition on February 20, 1915.

At the Golden Gate, a distance of two miles from the center of the site, the huge dimensions of the exposition palaces are becoming evident. The architects planned the exhibit buildings to scale with the lofty hills embracing the site upon the south, east and west. To-day a wonderful massing of exhibit buildings, a vast Oriental city, facing north and San Francisco harbor for 4,500 feet, is rising on the crescent inside the Golden Gate. Before many weeks the exposition site will be covered with a mass of towering structures, increasing in height and area daily and culminating in the great Tower of Jewels, which will rise to a height of 430 feet, dominating the entire group of the main exhibit palaces.

Of the eleven principal buildings in the main exhibit group the huge palaces of Machinery, Fine Arts, Education, Liberal Arts, Manufactures, Varied Industries, Mines, Transportation, Agriculture, and Food Product are under construction. Bids have been let for the Palace of Horticulture, one of the most unique structures in the world, to be built almost entirely of glass, covering five acres and surmounted by a dome 165 feet in height. Wonderful plants and flowers from many parts of the globe will be exhibited in this building. The management has offered a prize of \$1,000 for the best rose to be especially produced for exhibition.

The site is being prepared for the great Festival Hall, which will lie in the southern part of the grounds, between the Palace of Horticulture and the Service building. All that portion of the grounds is alive with men, animals and implements engaged in grading.

Bids will soon be called for the construction of the California building, the large and handsome structure, in the Old Spanish Mission style of architecture, which will occupy the site of the old Harbor View baths, close to the bay shore. This will be one of the most imposing structures of the main exhibit buildings.

The contracts have been awarded for the steel work and for the excavation for the Auditorium, in the New San Francisco civic center, between Van Ness Avenue, Hayes, Locust and Leavenworth streets, and work is now in progress upon these contracts. Bids for the actual erection of the Auditorium will be opened shortly.

The landscape gardening is going on apace, large areas of green sward being now seen where once there were sand dunes or the waters of the bay. The trees, shrubs and plants brought from many parts of the globe for the vast gardens about the buildings and in the exposition parks, esplanade and courts, are becoming more numerous and sturdy every day. These are at present in their temporary resting places at the Presidio nurseries and green houses, and in certain spots on the exposition grounds, ready to be transplanted to their permanent abiding places.

The exposition has its own freight ferry slip, at the foot of Buchanan street, completed and now in operation, conveying cars loaded with material, from the car floats to the exposition's

own railroad tracks, which already are advanced nearly the whole length of the grounds, with sidings and switches being added rapidly. Locomotives will soon be put on these tracks, which are of standard gauge, and then the freight cars will be sent back and forth as needed, greatly expediting the work of construction, and, later, the conveyance and installation of exhibits. A heavy force is at work grading the site of the car yards, just east of the Palace of Machinery.

Work will be commenced shortly on the passenger ferry slip, which adjoins that for freight, opposite the Army Transport docks, at Fork Mason.

The yacht and boat harbor, at the foot of Scott street, is completed, and is in use by the steamers and other coastwise craft bringing lumber and other material. Sometimes as many as half a dozen steamers are moored at one time to the yacht harbor wharves.

When the exposition is ended, this harbor, and the ferry slips belonging to the exposition, will revert to the city of San Francisco, forming a valuable addition to the city's docking facilities, for they are of best construction, of durable material.

The reparation of the ornamental statuary and other sculpture for the exhibit palaces is progressing so rapidly that A. Stirling Calder, the supervising sculptor, has had to have another large corrugated iron studio built for his corps of assistants. Some of this sculpture, of heroic size, is now temporarily placed out of doors by the west side of the first studio. The staff work for the various palaces is being made rapidly within the buildings themselves or by their sides, in small frame houses and sheds. There will be no delay in the applications of the staff work and sculpture.

An immense amount of work has been done that is not visible to the eye. Such have been the installation of the high pressure water system for fire protection, the low pressure service water system, the underground electric conduits and wiring, the drainage systems, road building and fertilization of the sandy soil by application of rich soil and guano. Work of this character has been extremely laborious and prolonged, in view of the fact that 625 acres of land had to be drained, watered and provided with electricity for power and light. Seventy-one acres had to be reclaimed from the tideland of the bay.

In the concessions district of the exposition site there is now nearly completed the first of the four fire stations that the exposition will maintain, properly manned and equipped with apparatus of the latest motor-driven pattern. At the present time, there is a temporary fire house at the south side of the main group of exhibit palaces, equipped with apparatus furnished by the San Francisco fire department. There are many hand chemical engines on the grounds, and the high pressure water system is in operation, but not yet fully completed.

Electric power is now being provided all over the area occupied by the sites of exhibit buildings now in course of construction, and it is being added to constantly.

More progress has been made in the preparations for the Panama-Pacific International Exposition than was made at a corresponding stage at any previous international exposition. Added to this is the fact that the climate of California, with no very warm days and no very cold ones throughout the year, permits perennial work, without cessation, which is not the case in other localities, and gives added assurance that February 20, 1915, will see every structure completed and every exhibit in place, ready for the opening of the exposition gates.

PERSONAL

Colonel James A. Irons has recently been appointed Military Attaché to the American Embassy in Tokio to fill the vacancy created by the death of Major Wigmore. The new military attaché was to arrive in Japan some time in January. Col. Irons was in Japan as attaché to Mr. O'Brien, the former Ambassador.

Mr. John Carey Hall, C.M.G., I.S.O., British Consul-General in Yokohama, has retired from the Consular service after forty-six years' work in China and Japan.

The Hon. W. W. Rockhill, formerly American Minister at Peking arrived in the Chinese Capital on January 17.

Mr. A. H. Lay, British Acting Consul-General at Kobe, will succeed Mr. A. M. Chalmers, who has been transferred to Yokohama.

Mr. James J. Rafferty has been appointed Collector of Inland Revenue for the Philippines.

Lord French will arrive in Peking on February 14, accompanied by Lady French. He will also have with him Messrs. Carter and Tristram, railway engineers, who will make a reconnaissance of the Shasi-Shingyi railway.

Mr. Lo Chong, who for some years past has been connected with the Ministry of Communications, and has latterly been chief secretary to the Minister, has been transferred to Tsinan-fu, the capital of Shantung province, as Commissioner of Foreign Affairs. Mr. Lo was educated at Oxford, and is possessed of capacity and tact that will enable him yet to distinguish himself in the service of his country. Mrs. Lo is also foreign educated, and is the daughter of the distinguished reformer Kang Yu-wei, who is famous for the efforts he made in 1898 to bring reforms into the land through the medium of the late Emperor. Those efforts brought about the coup d'état, which led to the virtual imprisonment of the Emperor by the old Dowager Empress, the execution of many reformers, and the flight and exile of Mr. Kang Yu-wei.

Mr. Satejiro Odagaki, the new Manager at Shanghai of the Mitsui Bussan Kaisha (Mitsui and Co., Ltd.), arrived at Shanghai on January 16.

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Experienced and responsible New York firm, now buying for important foreign interests and enjoying favorable relations with manufacturers—especially in Railway Materials and Equipment—can handle other accounts to advantage. It is hoped this announcement may favorably interest Railways, firms or individuals needing, in the United States, agents capable of giving better than the usual attention to purchases and shipments from that country. Unquestionable references will be furnished. All correspondence considered confidential.

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Ironfounders

A. F. Craig & Co.

Life Insurance

Chiha Mutual Life Insurance Co., Ltd.

Locks

Yale & Towne Mfg. Co.

Lubricants

Albany Lubricating Co.

Lumber Dealers

Robert Dollar Co.
China Import Export
Jardine, Matheson & Co.
Port Banga Lumber Co.

Machinery Merchants

Andersen, Meyer & Co.
Arnhold, Karberg & Co.
Shanghai Machine Co.
Fearon, Daniel & Co.
Frank L. Strong
Schuchardt & Schutte.
Shanghai Dock & Engineering Co., Ltd.
Samuel & Co., Ltd.
Tulloch & Co.

Mechanical Rubber Goods

F. Reddaway & Co.

Mill Machinery

Rose Downs & Thompson Ltd.
Shanghai Dock & Engineering Co., Ltd.
A. F. Craig & Co., Ltd.
E. R. & F. Turner

Mining Machinery

American Trading Co.
Melchers & Co.
Shanghai Dock & Engineering Co., Ltd.
Shewan, Tomes & Co.
New York Engineering Co.

Mineral Oil Plants & Machinery

A. F. Craig & Co.

Motors

Shanghai Dock & Engineering Co., Ltd.
Pratt's

Motor Tyres

F. Reddaway & Co.

Motor Launches

Shanghai Dock & Engineering Co., Ltd.

Paints Oils and Varnish

Standard Oil
Albany Lubricating Co.
F. A. Vander Loo & Co.
J. Dampney & Co.

Packings

F. Reddaway & Co.
Greene Tweed & Co.

Pulleys (Steel)

Schuchardt & Schütte
Shanghai Machine Co.
Shanghai Dock & Engineering Co., Ltd.

Pumps

The Goulds Manufacturing Co.
Shewan, Tomes & Co.
Jardine, Matheson & Co.
Shanghai Machine Co.
Shanghai Dock & Engineering Co., Ltd.
Joseph Evans & Sons

Railroads

Chinese Government Railways
Manila Railroad Co.
South Manchuria
Southern Pacific Co.
Chosen (Korea) Railways.

Railroad Supplies

American Trading Co.
American Locomotive Co.
Andersen, Meyer & Co.
Arnhold, Karberg & Co.
Baldwin Locomotive Work.
Fearon, Daniel & Co.
Hannoversche Maschinenbau A. G. Vormalis
Georg Egestorff.
Henschel & Sohn.
P. Herbrand & Co.
Jardine, Matheson & Co., Ltd.
Melchers & Co.
Mitsui Bussan Kaisha
Shewan, Tomes & Co.
Shanghai Machine Co.
Shanghai Dock & Engineering Co., Ltd.
Tyler & Co.
U. S. Steel Products Co.

Railway Signal Co., Ltd., The

Robert Dollar Co.
Samuel & Co., Ltd.
Dick, Kerr & Co., Ltd.
Avonside Engine Co., Ltd.
Siemens & Co.
T. H. Symington Co.

Reinforced Concrete Construction

Shanghai Dock & Engineering Co., Ltd.
Trussed Concrete Steel Co.
U. S. Steel Products Co.

Roofing Paper

California Manila Lumber Commercial Co

Rope Manufacturers

Johnson-Pickett Rope Co.
U. S. Steel Products Co.
Ynchausti & Co.
Shewan Tomes & Co.

Ship-Chandlery

Ynchausti & Co.

Shipping Agents

Cia. General de Tabacos
Shewan, Tomes & Co.
Stevenson & Co., Ltd.

Shipbuilding and Repairs

Fiat-san Giorgio Ltd.
Tsingtauer Werft
Hongkong & Whampoa Dock Co., Ltd.
Kiangnan Dock and Engineering Co., Ltd.
Mitsui Bishi Dock and Engineering Works
Shanghai Dock and Engineering Co., Ltd.
Smith's Dock Co., Ltd.
The Talkoo Dockyard and Engineering Com-
pany of Hongkong, Limited
William Cramp & Sons.

Steamship Companies

Cia. General de Tabacos
Pacific Mail S. S. Co.
Ynchausti & Co.
Toyo Kisen Kaisha.

Steel Manufacturers

United States Steel Products Export Co

Steel Works

Bohler Bros. & Co., Ltd.
U. S. Steel Products Co.

Stokers

Babcock & Wilcox Ltd.

Structural Steel

Bohler Bros. & Co.
Shanghai Dock & Engineering Co., Ltd.
U. S. Steel Products Co.

Sugar Machinery

Honolulu Iron Works.
A. F. Craig & Co.

Superheaters

Babcock & Wilcox Ltd.

Tanks

Pacific Tank and Pipe Co.
Shanghai Dock & Engineering Co., Ltd.
U. S. Steel Products Co.
A. F. Craig & Co.

Telephones

The Western Electric Co.

Textile Machinery

A. F. Craig & Co.

Tiles and Bricks

Green Island Cement Co., Ltd.
Chinese Eng. Mining Co.

Tobacco Dealers

British-American Tobacco Co., Ltd.
Cia. General de Tabacos
Olsen & Co., Walter E.

Tools

American Tool Works Co.
Lodge & Shipley Machine Tool Co.
Shanghai Machine Co.
Easterbrook Allcard & Co., Ltd.
The Selson Engineering Co., Ltd.
Shanghai Dock & Engineering Co., Ltd.

Windmills

Defiance Machine Works.

Water Softeners

Babcock & Wilcox Ltd.

Wood Working Machinery

American Tool Works Co.
Defiance Machine Works.
Lodge & Shipley Machine Tool Co.
Shanghai Dock & Engineering Co., Ltd.